TXD-RE210

SERVICE MANUAL

AEP Model

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
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CD Section	Model Name Using Similar Machanism	NEW
	CD Machanism Type	CDM28-5BD23
	Base Unit Name	BU-5BD23
	Optical Pick-up Type	KSS-213B/S-N
Tape deck Section	Model Name Using Similar Machanism	TXD-R11
	Tape Transport Mechanism Type	TCM-190RB52C

SPECIFICATIONS

Compact Disc Player Section

System

Type Compact disc digital audio system

Laser Semiconductor laser (λ = 780 nm)
Emission duration: continuous

Laser output Less than 44.6 μW*
* This output is the value measured at distance of 200 mm from the objectiv lens surface on the Optical Pick-up Block with 7 mm aperture.

Frequency response 2 Hz - 20 kHz (± 0.5 dB)

Signal-to-noise ratio More than 100 dB

Dynamic range More than 95 dB

Harmonic distortion Less than 0.007%

Channel separation More than 95 dB

Cassette Deck Section

System

Recording system 4-track 2-channel stereo

Bias AC bias

Head (x 1) Erasing F & F
Playback/Recording SD

Motor Capstan motor × 1 (DC servo motor)
Reel motor × 1 (DC motor)

Fast-winding time (approx.)
90 sec. (with Sony C-60 cassette)

Frequency response (Dolby NR off)
Type I tape, Sony Type I (NORMAL):
30 - 16,000 Hz (±3 dB)
20 - 18,000 Hz (±6 dB)
Type II tape, Sony Type II (HIGH):
30 - 17,000 Hz (±3 dB)
20 - 19,000 Hz (±6 dB)
Type IV tape, Sony Type IV (METAL):
30 - 19,000 Hz (±3 dB)
20 - 21,000 Hz (±6 dB)

Signal-to-noise ratio
(at peak level, weighted, and with Dolby NR off)
Type I tape, Sony Type I (NORMAL):
55 dB
Type II tape, Sony Type II (HIGH):
57 dB
Type IV tape, Sony Type IV (METAL):
58 dB

S/N ratio improvement

Dolby NR on	Approximate values
B	5 dB at 1 kHz, 10 dB at 5 kHz
C	15 dB at 500 Hz, 20 dB at 1 kHz

Harmonic distortion Type I tape, Sony Type I (NORMAL):
0.4% (160 nWb/m 315 Hz, 3rd H.D.)
Type IV tape, Sony Type IV (METAL):
1.8% (250 nWb/m 315 Hz, 3rd H.D.)

Inputs

	Jack type	Maximum input sensitivity
TAPE IN	Phono jacks	0.16 V (input impedance: 47 kilohms)

Outputs

	Jack type	Maximum output level	Load impedance
TAPE OUT (FIXED)	Phono jacks	0.5 V (at a load impedance of 47 kilohms)	Over 10 kilohms
CD OUT (FIXED)	Phono jacks	2 V (at a load impedance of 50 kilohms)	Over 10 kilohms
PHONES (VARIABLE)	Stereo phone jack	0 - 3 mW (at a load impedance of 32 ohms)	

General

Power requirements 220 V - 230 V AC, 50/60 Hz

Power consumption 23 W

Dimensions 430 × 120 × 282 mm (w/h/d)
(17 × 4 3/4 × 11 1/8 inches)

Mass (approx.) 4.5 kg (9 lb. 15 oz.)

Design and specifications are subject to change without notice.

COMPACT DISC CASSETTE DECK

MICROFILM

SONY®

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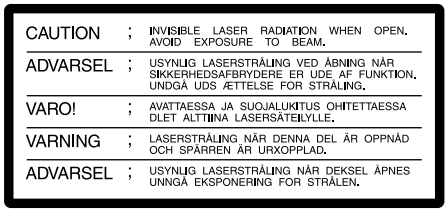
Laser component in this product is capable of emitting radiation exceeding the limit for Class 1.

This appliance is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT MARKING is located on the rear exterior.


CAUTION ; INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM.
ADVARSEL ; USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDS ÆTTELSE FOR STRÅLING.
VARO! ; AVATTAESSA JA SUOJALUKITUS OHITETTAESSA DLET ALTTIINA LASERSÄTEILYLLE.
VARNING ; LASERSTRÅLING NÄR DENNA DEL ÄR OPPNÅD OCH SPÄRREN ÄR URXOPPLAD.
ADVARSEL ; USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES UNNGÅ EKSPONERING FOR STRÅLEN.

This caution label is located inside the unit.

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

SECTION 1
SERVICING NOTE

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

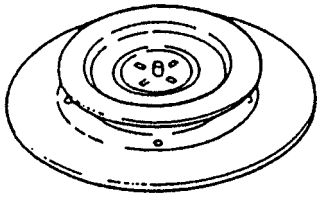
NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe more than 30 cm away from the objective lens.

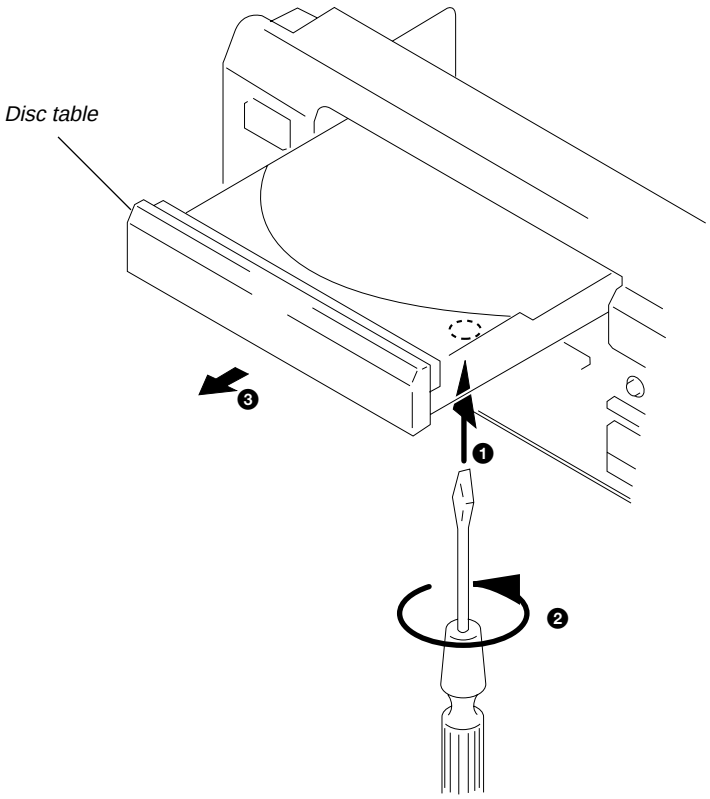
CHUCK PLATE JIG ON REPAIRING

On repairing CD section, playing a disc without the CD lid, use Chuck Plate Jig.

- Code number of Chuck Plate Jig : X-4918-255-1



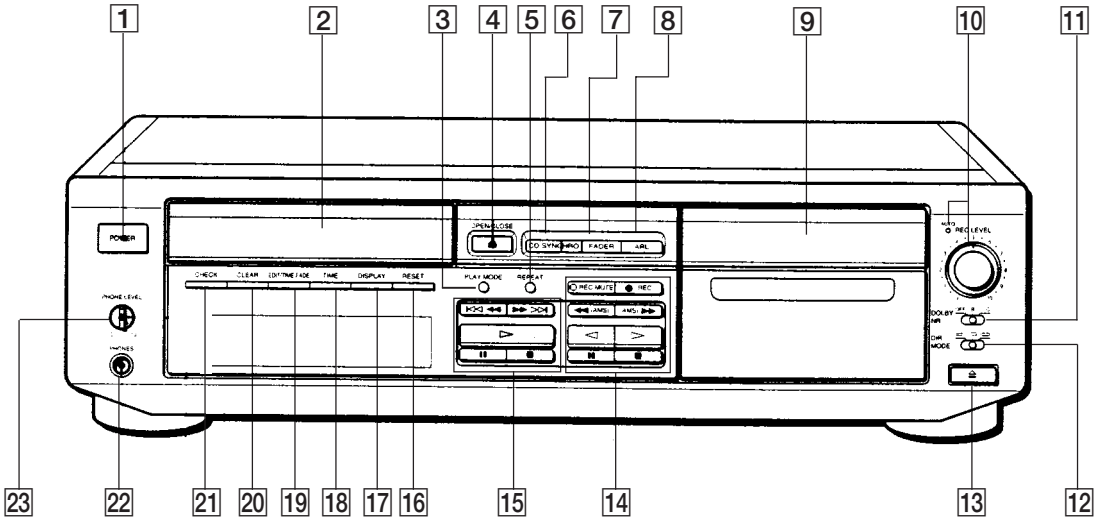
- Disc table getting out procedure on the power supply is OFF.



SECTION 2
GENERAL

This section is extracted from instruction manual.

LOCATION AND FUNCTION OF CONTROLS



1 POWER switch
2 Disc tray
3 PLAY MODE button
4 OPEN/CLOSE button
5 REPEAT button
6 CD SYNCHRO button
7 FADER button
8 ARL button
9 Cassette deck
10 REC LEVEL control/AUTO indicator
11 DOLBY NR switch
12 DIRection MODE switch
13 Eject button
14 Tape operating buttons
- ● REC button
- O REC MUTE button
- ◀◀, ▶▶ buttons
- ◁, ▷ buttons
- ■ (stop) button
- ❚❚ (pause) button

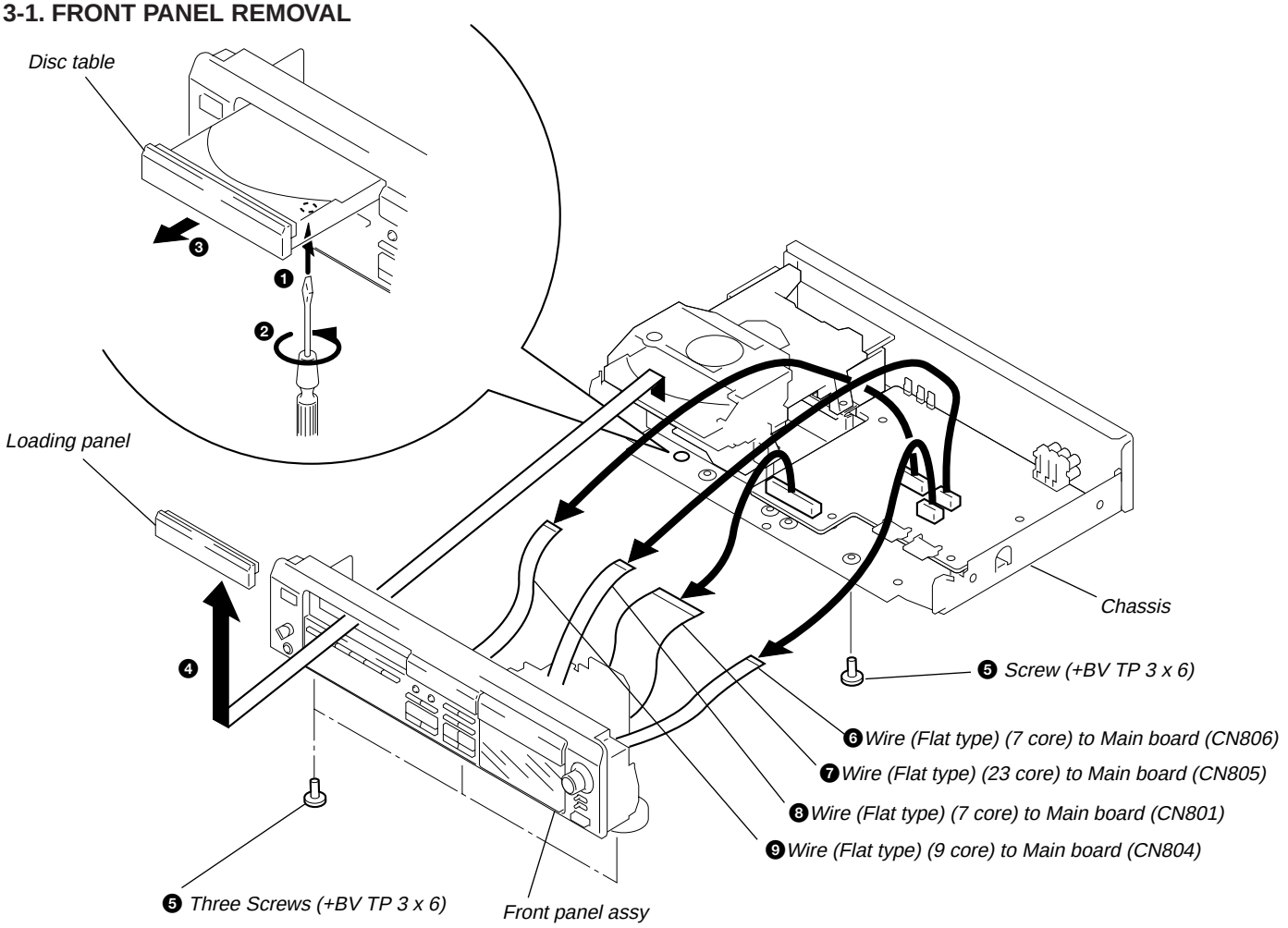
15 CD operating buttons
- ▶▶ ▷▷❙ button
- ❙◁◁ ◀◀ button
- ▷ button
- ■ (stop) button
- ❚❚ (pause) button

16 RESET button
17 DISPLAY button
18 TIME button
19 EDIT/TIME FADE button
20 CREAR button
21 CHECK button
22 PHONES jack
23 PHONE LEVEL control

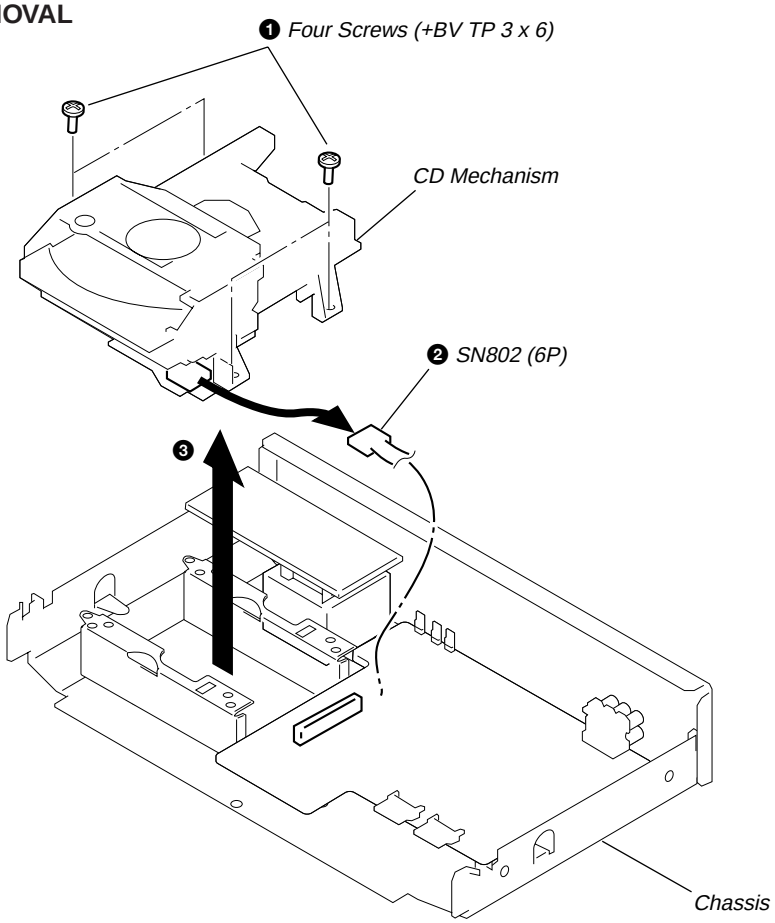
SECTION 3
DISASSEMBLY

Note : Follow the disassembly procedure in the numerical order given.

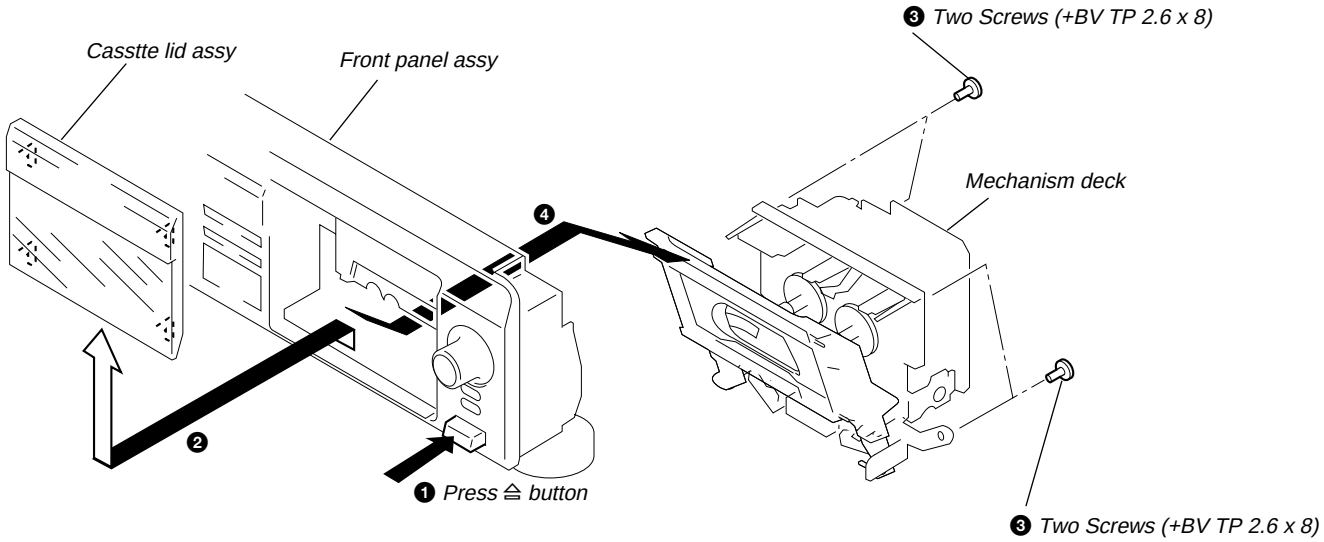
3-1. FRONT PANEL REMOVAL


Disc table
❸
❶
❷
Loading panel
Chassis
❹
❺ Screw (+BV TP 3 x 6)
❻ Wire (Flat type) (7 core) to Main board (CN806)
❼ Wire (Flat type) (23 core) to Main board (CN805)
❽ Wire (Flat type) (7 core) to Main board (CN801)
❾ Wire (Flat type) (9 core) to Main board (CN804)
❺ Three Screws (+BV TP 3 x 6)
Front panel assy

3-2. CD MECHANISM REMOVAL



3-3. MECHANISM DECK REMOVAL



SECTION 4
ADJUSTMENTS

4-1. MECHANICAL ADJUSTMENTS

PRECAUTION

1. Clean the following parts with a denatured-alcohol-moistened swab :
   record/playback head pinch roller
   erase head rubber belts
   capstan
2. Demagnetize the record/playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

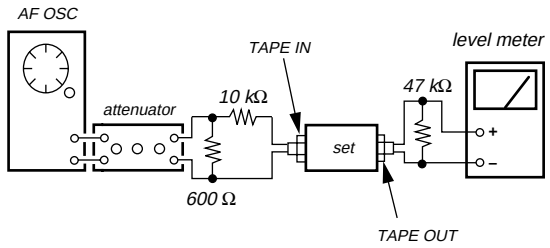
● Torque Measurement

Mode	Torque Meter	Meter Reading
Forward	CQ-102C	30 to 65 g•cm (0.42 – 0.9 oz•inch)
Forward Back Tension	CQ-102C	1 to 7 g•cm (0.0134– 0.097 oz•inch)
Reverse	CQ-102RC	30 to 65 g•cm (0.41 – 0.9 oz•inch)
Reverse Back Tension	CQ-102RC	1 to 7 g•cm (0.0134– 0.097 oz•inch)
FF, REW	CQ-201B	70 to 120 g•cm (0.972– 1.66 oz•inch)

4-2. ELECTRICAL ADJUSTMENTS

1. The adjustment should be performed in the publication.
   (Be sure to make playback adjustment at first.)
2. The adjustment and measurement should be performed for both L-CH and R-CH.
   - Switch position
     DOLBY NR switch : OFF
     DIR MODE switch : ⇌
   - Standard record position :
     Deliver the standard input signal level to input jack and set the REC LEVEL control to obtain the standard output signal level as follows.

Record Mode



● Standard Input Level

Input Terminal	TAPE IN
source impedance	10kΩ
input signal level	0.5V (–3.8dB)

● Standard Output Level

Output Terminal	TAPE OUT
load impedance	47kΩ
output signal level	0.5V (–3.8dB)

● Test tape

Tape	Contents	Use
P-4-A100	10 kHz, –10dB	Azimuth Adjustment
P-4-L300	315Hz, 0dB	PB Level Adjustment
WS-48B	3kHz, 0dB	Tape Speed Adjustment

0dB=0.775V

TC Test Mode

setting : Push POWER button with STOP key and REC MUTE key.

function : ● when start recording, COUNTER is set to "0000" and COUNTER MEMORY function is effective ("MEMORY" appears on FLD).
● While playing or AMS, the signal level is displayed. ("L" / "H")

● Test tape

Tape	Contents	Use
P-4-A100	10 kHz, –10dB	Head Azimuth Adjustment
P-4-L300	315Hz, 0dB	Level Adjustment
WS-48B	3kHz, 0dB	Tape Speed Adjustment

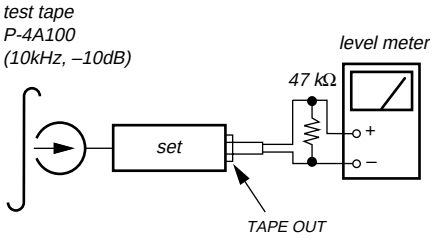
0dB=0.775V

Record/Playback Head Azimuth Adjustment

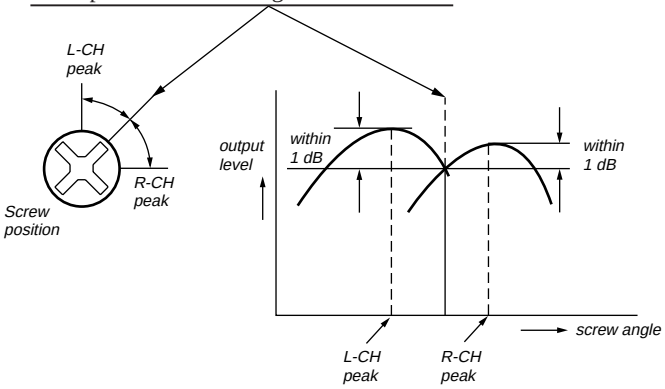
● Carrey out servicing or repairs form the REVERSE direction first.

Procedure :

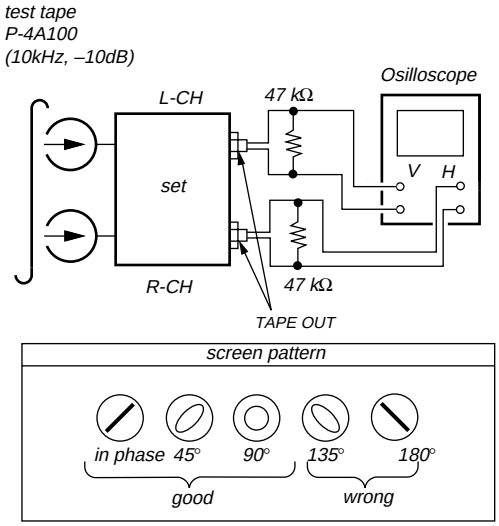
1. Mode : Forward playback



2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 1dB.



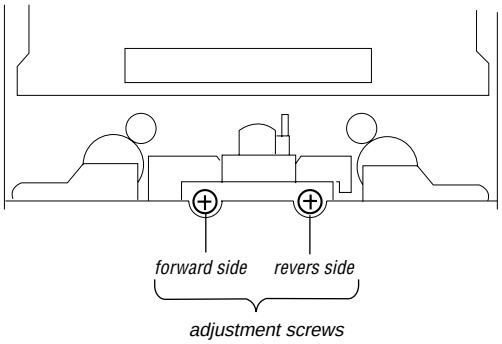
3. Playback Mode



4. Change the reverse playback mode and repeat the steps 1 to 3.
5. After the adjustment, lock the adjustment screw with suitable locking compound.

Adjustment Location :

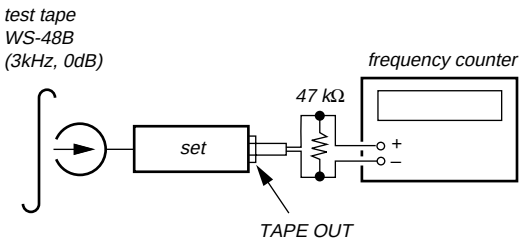
– record/playback head –



Tape Speed Adjustment

Procedure :

Mode : Playback



1. Set to forward playback mode.
2. Adjust RV71 so that frequency reading becomes 3,000± 90Hz.

Frequency difference between the beginning and the end of the tape should be within ± 3%.

Adjustment Location : AUDIO board.
(see page 9)

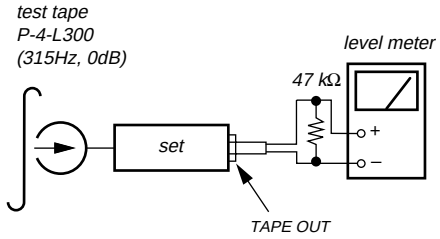
Sample Value of Wow and flutter

W. RMS (JIS) within 0.3%
(test tape : WS-48B)

Playback Level Adjustment

Procedure :

Mode : Playback



Adjust RV11 (L-CH) and RV21 (R-CH) so the level meter reading becomes the adjustment limits below.

Adjustment Level :

TAPE OUT level : – 7.7± 0.5dB (0.301 to 0.338V)
Level Difference between Channels : within 0.5dB

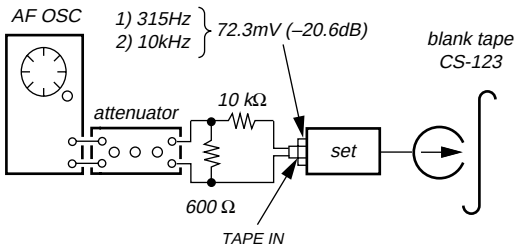
Confirm the TAPE OUT level does not change in playback mode while changing the mode from playback to stop several times.

Adjustment Location : AUDIO board.
(see page 9)

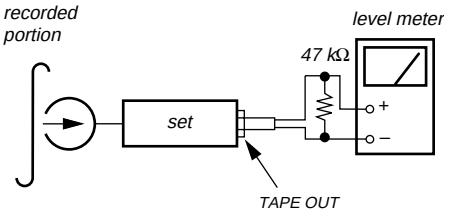
Record Bias Adjustment

Procedure :

1. Mode : Record



2. Mode : Playback



3. Confirm playback the signal recorded in step 1 become adjustment level as follows.
4. If these levels do not adjustment level, adjust the RV12 (L-CH) and RV22 (R-CH) to repeat step 1 and 4.

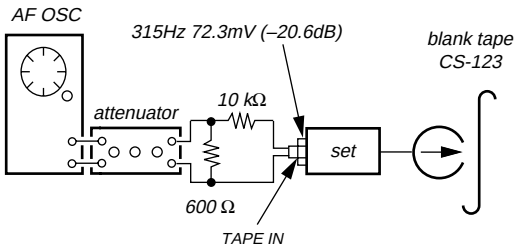
Adjustment level : Playback output of 315Hz to playback output of 10kHz : ±0.5dB.

Adjustment Location : AUDIO board.

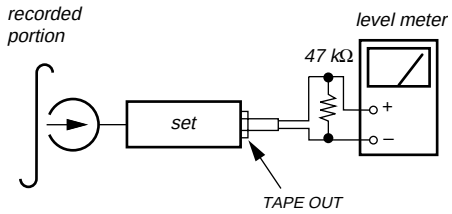
Record Level Adjustment

Procedure :

1. Mode : Record



2. Mode : Playback



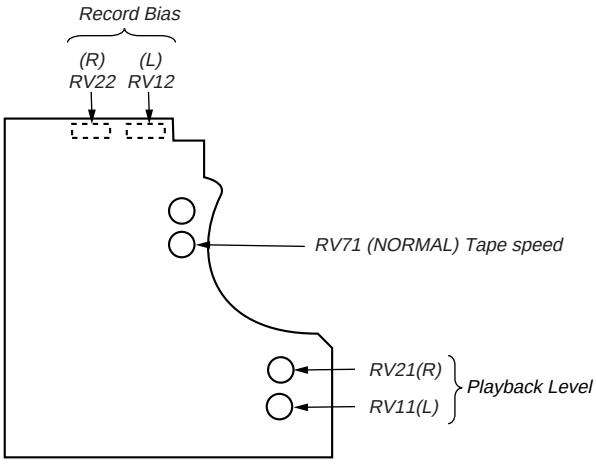
3. Confirm playback the signal recorded in step 1 become adjustment level as follows.
4. If these levels do not adjustment level, adjust the RV111 (L-CH) and RV211 (R-CH) to repeat step 1 and 4.

Adjustment Level :

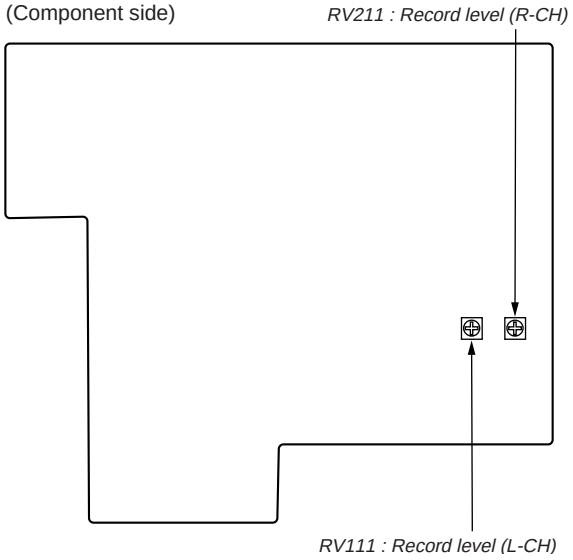
TAPE OUT level : – 26± 0.5dB (36.7 to 41.1mV)

Adjustment Location : MAIN board.

[AUDIO BOARD] (Conductor side)



[MAIN BOARD]
(Component side)

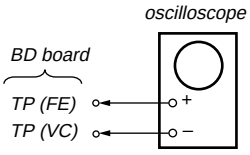


CD SECTION

Note :

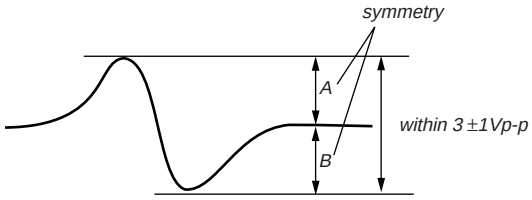
1. CD Block basically constructed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use the oscilloscope with more than 10MΩ impedance.
4. Clean an object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

S-Curve Check



Procedure :

1. Connect oscilloscope to test point TP(FE) and BD board.
2. Connect between test point TP (FEI) and TP (VC) by lead wire.
3. Turned Power switch on.
4. Put disc (YEDS-18) in and turned Power switch on again and actuate the focus search. (Actuate the focus search when disc table is moving in and out.)
5. Check the oscilloscope waveform (S-curve) is symmetrical between A and B. And confirm peak to peak level within 3 ±1Vp-p.

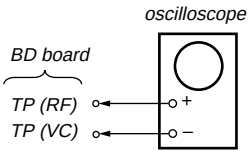


6. After check, remove the lead wire connected in step 2.

Note : ● Try to measure several times to make sure that the ratio of A : B or B : A is more than 10 : 7.

● Take sweep time as long as possible and light up the brightness to obtain best waveform.

RF Level Check

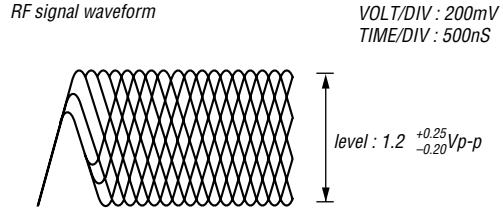


Procedure :

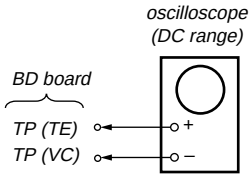
1. Connect oscilloscope to test point TP (RF) on BD board.
2. Turned Power switch on.
3. Put disc (YEDS-18) in and playback.
4. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

Note :

Clear RF signal waveform means that the shape " ◊ " can be clearly distinguished at the center of the waveform.

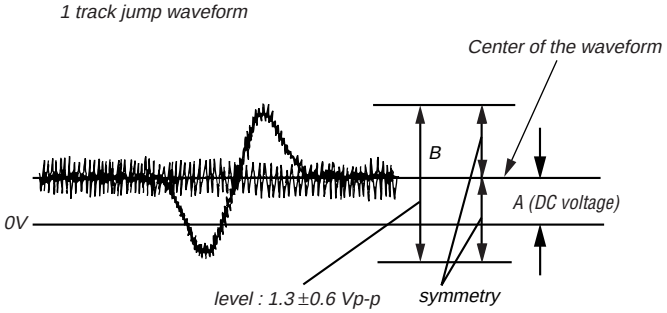


E-F Balance (1 Track Jump) Check



Procedure :

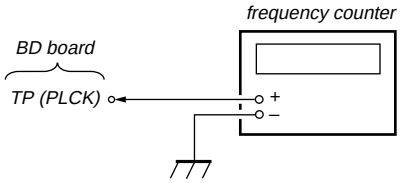
1. Connect oscilloscope to test point TP(TE) on BD board.
2. Turned Power switch on.
3. Put disc (YEDS-18) in to play the number five track.
4. Press the "❚❚ (Pause)" button. (Becomes the 1 track jump mode)
5. Check the level B of the oscilloscope's waveform and the A (DC voltage) of the center of the Traverse waveform.
   Confirm the following :
   A/B x 100 = less than ±22%



RF PLL Free-run Frequency Check

Procedure :

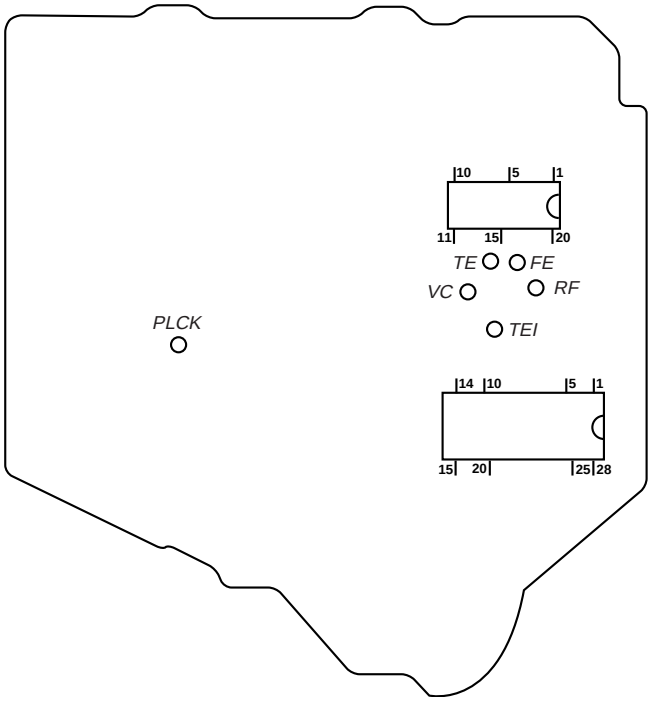
1. Connect frequency counter to test point (PLCK) with lead wire.



2. Turned Power switch on.
3. Put disc (YEDS-18) in to play the number five track.
   Confirm that reading on frequency counter is 4.3218MHz.

Adjustment Location :

[BD BOARD] (Side B)



SECTION 5
EXPLANATION OF IC TERMINALS

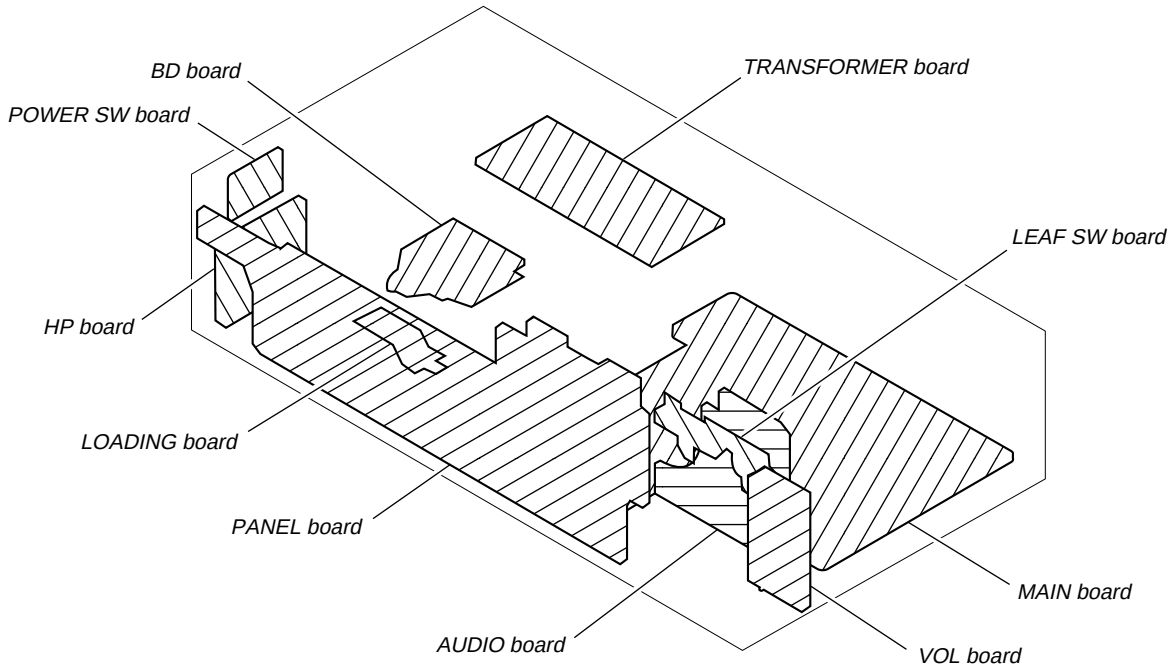
IC801 µPD78044FGF029-3B9 (SYSTEM CONTROL)

Pin No.	Pin name	I/O	Description
1	LED	O	AUTO REC LEVEL LED ON/OFF.
2–7	1G – 6G	O	FL grid drive.
8	VDD	–	Power supply (+5V)
9	CLK	O	Command clock output for IC101 and IC104.
10	DATA	O	Command data output for IC101 and IC104.
11	SENS	I	SENS input for IC101 and IC104.
12	PGML	O	Command latch output for IC104.
13	AMUTE	O	Mute control output.
14	SQCLK	O	Q-data read-out for clock output.
15	NC	O	Not used (Open).
16	SUBQ	I	Q-data input.
17	$\overline{\text{RESET}}$	I	System reset input.
18	METAL	I	Metal tape detect input.
19	$\overline{\text{TC TEST}}$	I	TC test mode input. “L” : Test mode.
20	AVSS	–	A/D ground terminal.
21	LD IN	O	CD loading-in output.
22	LD OUT	O	CD loading-out output.
23	AD CTRL1	O	A/D extended input (1) select signal output.
24	AD CTRL0	O	A/D extended input (0) select signal output.
25	AD1	I	A/D extended input (1).
26	AD0	I	A/D extended input (0).
27	S. REEL	I	Supply reel pulse input.
28	CD TEST	I	CD test mode input.
29	AVDD	–	A/D analog power supply.
30	AVREF	I	A/D reference voltage input.
31	STOP SW	I	STOP switch input.
32	XT2	–	Not used (Open).
33	VSS	–	Ground terminal.
34	X1	I	System clock. (4MHz)
35	X2	O	System clock. (4MHz)
36	NR1	O	Dolby mode select output (1).
37	NR0	O	Dolby mode select output (2).
38	BS/$\overline{\text{AMS}}$	O	Blank skip/AMS select output.
39	$\overline{\text{RELAY}}$	O	REC/PLAY select output.
40	XLT	O	Command lucth output.
41	REEL–	O	Reel motor control output.
42	REEL+	O	Reel motor control output.
43	VOL OUT	O	Electrical volume control.
44	$\overline{\text{REC MUTE}}$	O	REC mute ON/OFF control.
45	POWER OUT	O	Power switch control.
46	SCOR	I	Q-data sync input.
47	SIRCS IN	I	Remote control signal input.
48	VSS (IC)	–	Ground terminal.
49	AMS IN	I	AMS signal input.
50	POWER IN	I	Power OFF detect input.

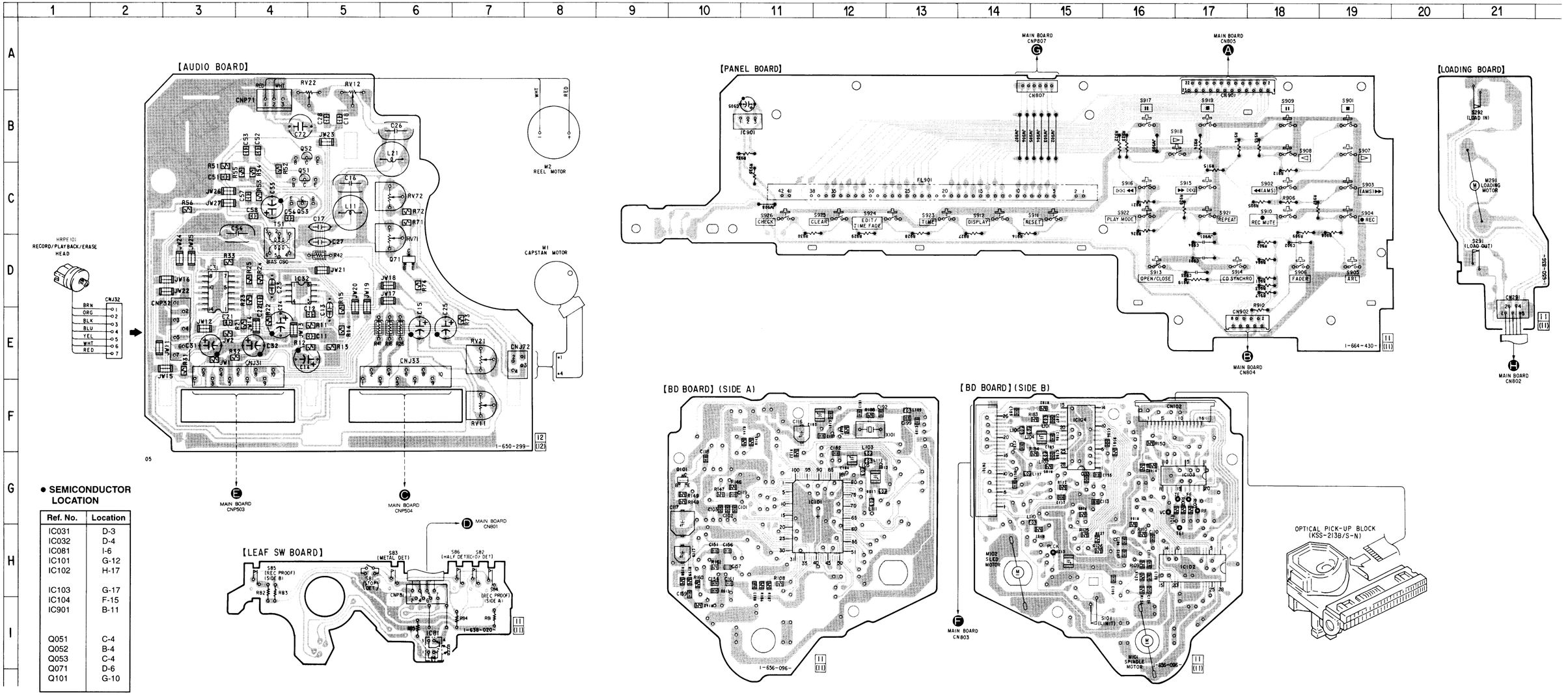
Pin No.	Pin name	I/O	Description
51	LD ON	O	Laser diode ON output.
52	VDD	–	Power supply (+5V).
53	HP SEL	O	Headphone output selection.
54	INPUT SEL	O	Recording source select.
55	$\overline{\text{TC LINE MUTE}}$	O	TC line mute control output.
56–70	S1–S15	O	FL segment output.
71	VDISP	–	Power supply for FL.
72–77	S16–S21	O	FL segment output.
78	BIAS	O	Bias ON/OFF output.
79	PB/REC	O	PB/REC select output for Dolby (IC501).
80	CAP.M	O	Capstan motor ON/OFF control.

SECTION 6
DIAGRAMS

● **CIRCUIT BOARDS LOCATION**



6-1. PRINTED WIRING BOARDS – BD SECTION –



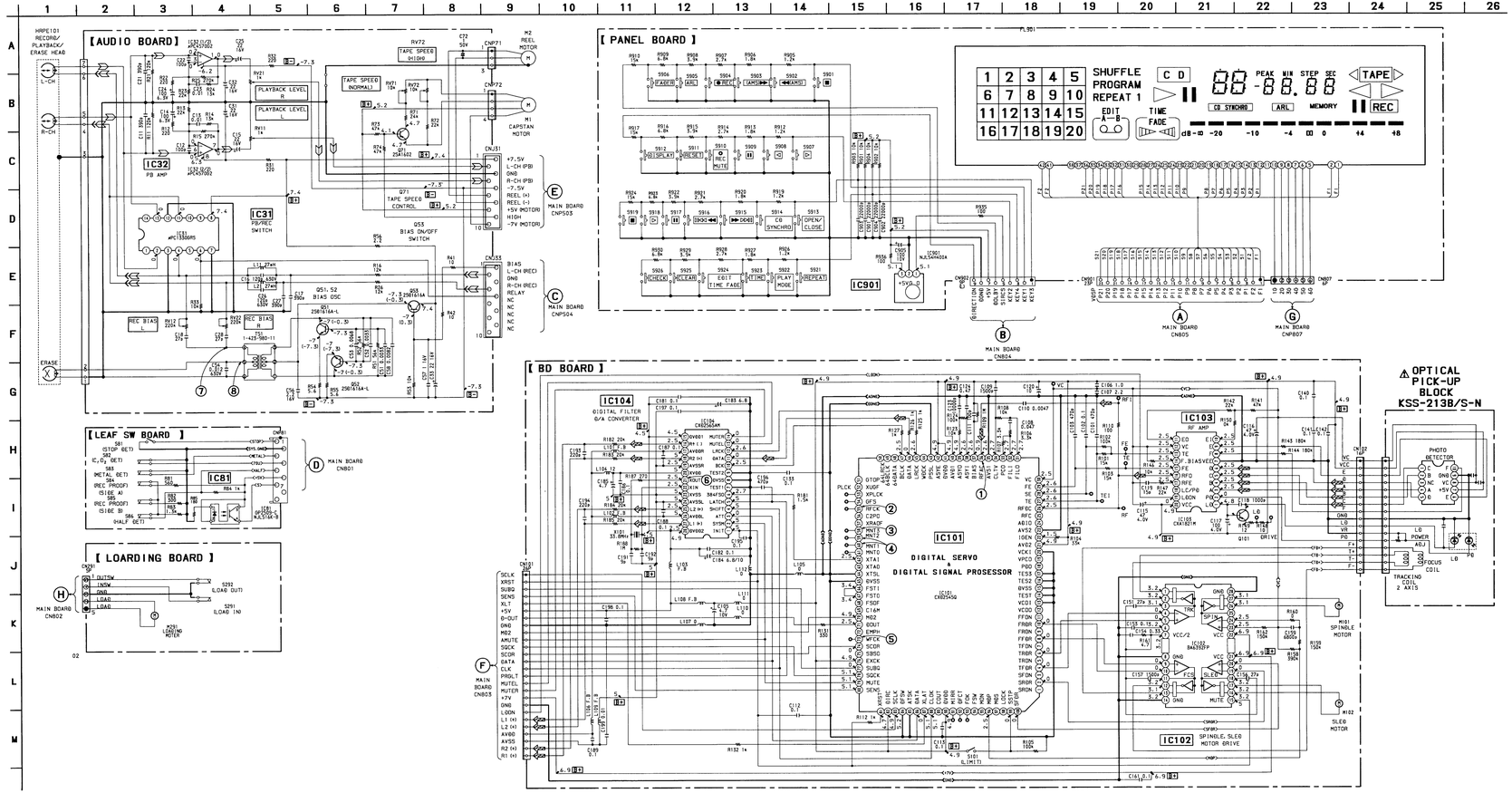
● SEMICONDUCTOR LOCATION

Ref. No.	Location
IC031	D-3
IC032	D-4
IC081	I-6
IC101	G-12
IC102	H-17
IC103	G-17
IC104	F-15
IC901	B-11
Q051	C-4
Q052	B-4
Q053	C-4
Q071	D-6
Q101	G-10

Note:

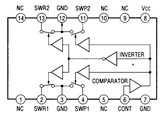
- ○— : parts extracted from the component side.
- ◯ : Through hole.
- ▨ : Pattern on the side which is seen.

6-2. SCHEMATIC DIAGRAM – BD SECTION –

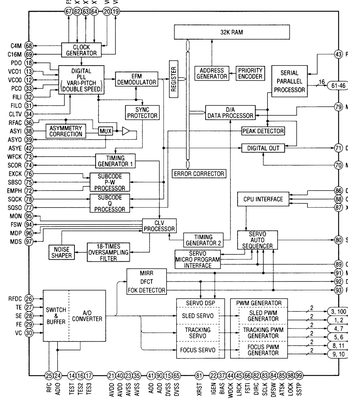


● IC BLOCK DIAGRAMS – BD SECTION –

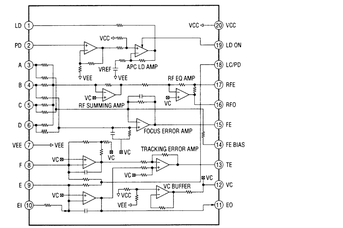
IC31 uPC1330GR



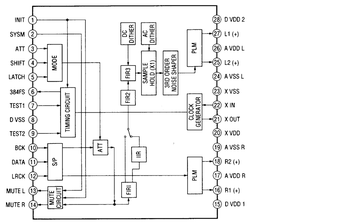
IC101 CXD2545Q



IC103 CXA1821M-T6



IC104 CXD2565M



● WAVEFORMS

① IC101 ㊱ RF AC — 1.3 Vp-p

② IC101 ㊲ RF CK — 5.3 Vp-p, 138.0 µsec

③ IC101 ㊳ MNT 3 — 5.3 Vp-p, 138.0 µsec

④ IC101 ㊴㊵ MNT 2,1 — 5.3 Vp-p, 138.0 µsec

⑤ IC101 ㉜ WFCK — 4.8 Vp-p, 139.5 µsec

⑥ IC104 ㉑ X OUT — 1.2 Vp-p, 33.8 MHz

⑦ T51 ④ — 17.1 Vp-p, 12.3 µsec

⑧ T51 ⑤ — 4.6 Vp-p, 12.3 µsec

Note :

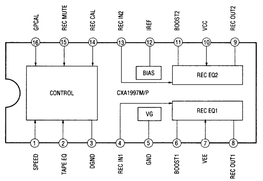
- All capacitors are in µF unless otherwise noted. pF: µµF
  50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- [fusible] : nonflammable resistor.

Note : The components identified by mark ⚠ or dotted line with mark ⚠are critical for safety.
Replace only with part number specified.

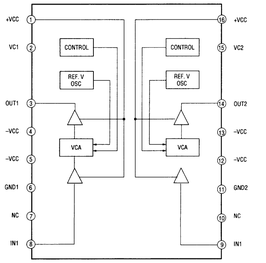
- B+ : B+ Line
- B– : B– Line
- [adj] adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : PLAY (TAPE SECTION), STOP (CD SECTION)
  ( ) : REC (TAPE SECTION)
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ▷ : PB ▷ : CD
  ▷ : REC

● IC BLOCK DIAGRAMS – MAIN SECTION –

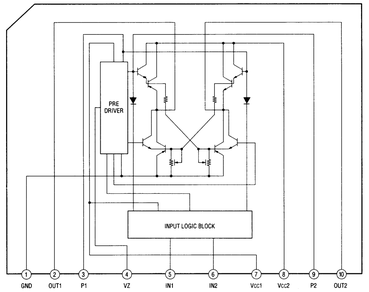
IC502 CXA1597P



IC503 M5283P



IC806 LB1641

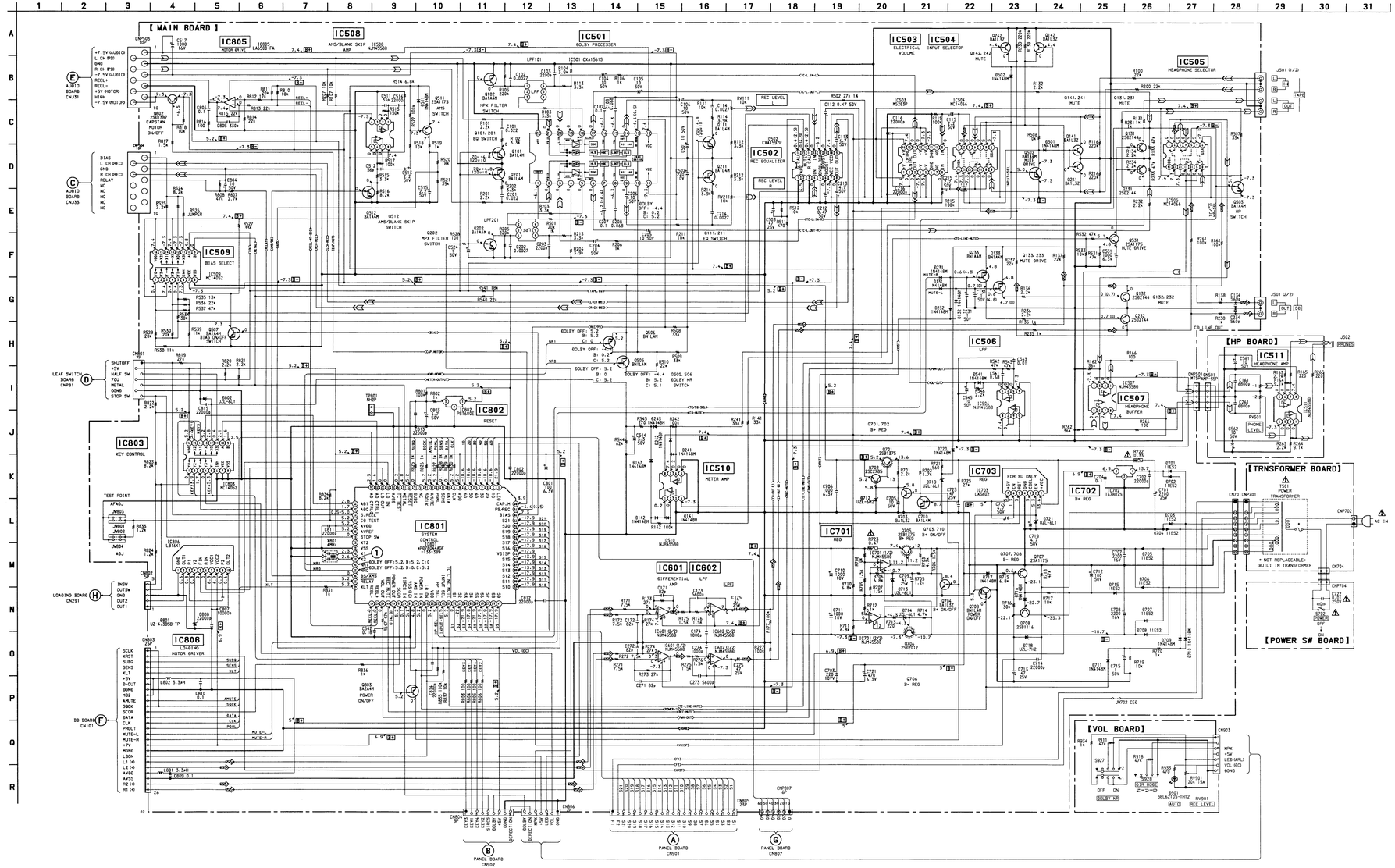


Note :
- All capacitors are in µF unless otherwise noted. pF: µµF
  50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼W or less unless otherwise specified.
- % : indicates tolerance.
- Δ : internal component.
- : fusible resistor.

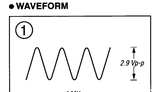
Note : The components identified by mark Δ or dotted line with mark Δare critical for safety.
Replace only with part number specified.

- B+ : B+ Line
- B- : B- Line
- : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : PLAY (TAPE SECTION), STOP (CD SECTION)
  ( ) : REC (TAPE SECTION), (PLAY (CD SECTION)
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  : PB : CD
  : REC

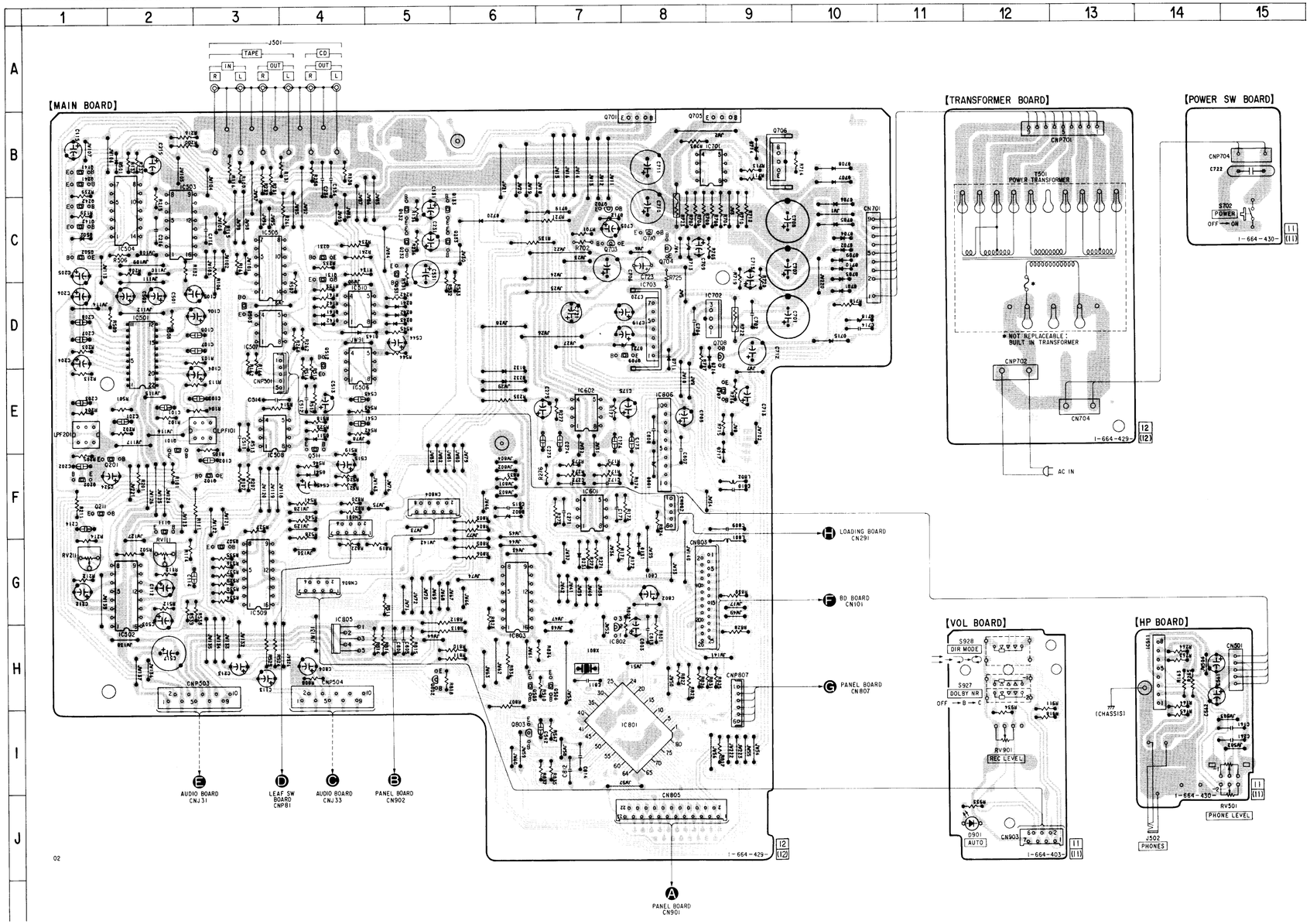
6-3. SCHEMATIC DIAGRAM – MAIN SECTION –



● WAVEFORM



6-4. PRINTED WIRING BOARDS – MAIN SECTION –



● SEMICONDUCTOR LOCATION

Ref. No.	Location	Ref. No.	Location
D131	G-8	IC511	H-14
D132	E-6	IC601	F-7
D141	D-4	IC602	E-7
D142	D-4	IC701	B-9
D143	D-4	IC702	D-9
D231	G-7	IC703	D-8
D232	E-6	IC801	I-8
D241	D-5	IC802	H-7
D242	D-5	IC803	G-6
D243	D-5	IC805	H-4
D501	B-2	IC806	E-8
D502	C-1		
D511	E-4		
D541	F-4	Q101	E-2
D701	D10	Q102	F-3
		Q111	F-2
D702	C10	Q131	Q-4
D703	C10	Q132	C-5
D704	C10		
D705	C10	Q133	C-5
D706	C10	Q141	B-1
		Q142	C-1
D707	B-10	Q201	F-2
D708	B-10	Q202	F-1
D709	C-10		
D710	C-10	Q211	F-1
D711	D-8	Q231	Q-4
		Q232	C-5
D712	C-7	Q233	C-5
D713	C-8	Q241	B-1
D714	B-9		
D715	D-10	Q242	C-1
D716	D-9	Q502	C-1
		Q503	D-3
D717	E-9	Q505	H-6
D718	D-10	Q506	H-7
D719	C-7		
D720	C-6	Q507	G-3
D721	D-8	Q511	E-4
		Q512	D-4
D801	F-8	Q531	C-5
D802	F-6	Q701	B-8
D901	J-12		
		Q702	C-7
		Q703	C-7
IC501	D-2	Q704	C-8
IC502	G-2	Q705	B-9
IC503	C-2	Q706	B-9
IC504	C-2		
IC505	C-3	Q707	E-9
		Q708	D-9
IC506	E-4	Q709	D-8
IC507	D-3	Q710	C-8
IC508	E-3	Q802	H-5
IC509	G-3		
IC510	D-4	Q803	I-6

Note on Printed Wiring Boards:

Note:

- ○— : parts extracted from the component side.
- : Pattern on the side which is seen.

SECTION 7
EXPLODED VIEWS

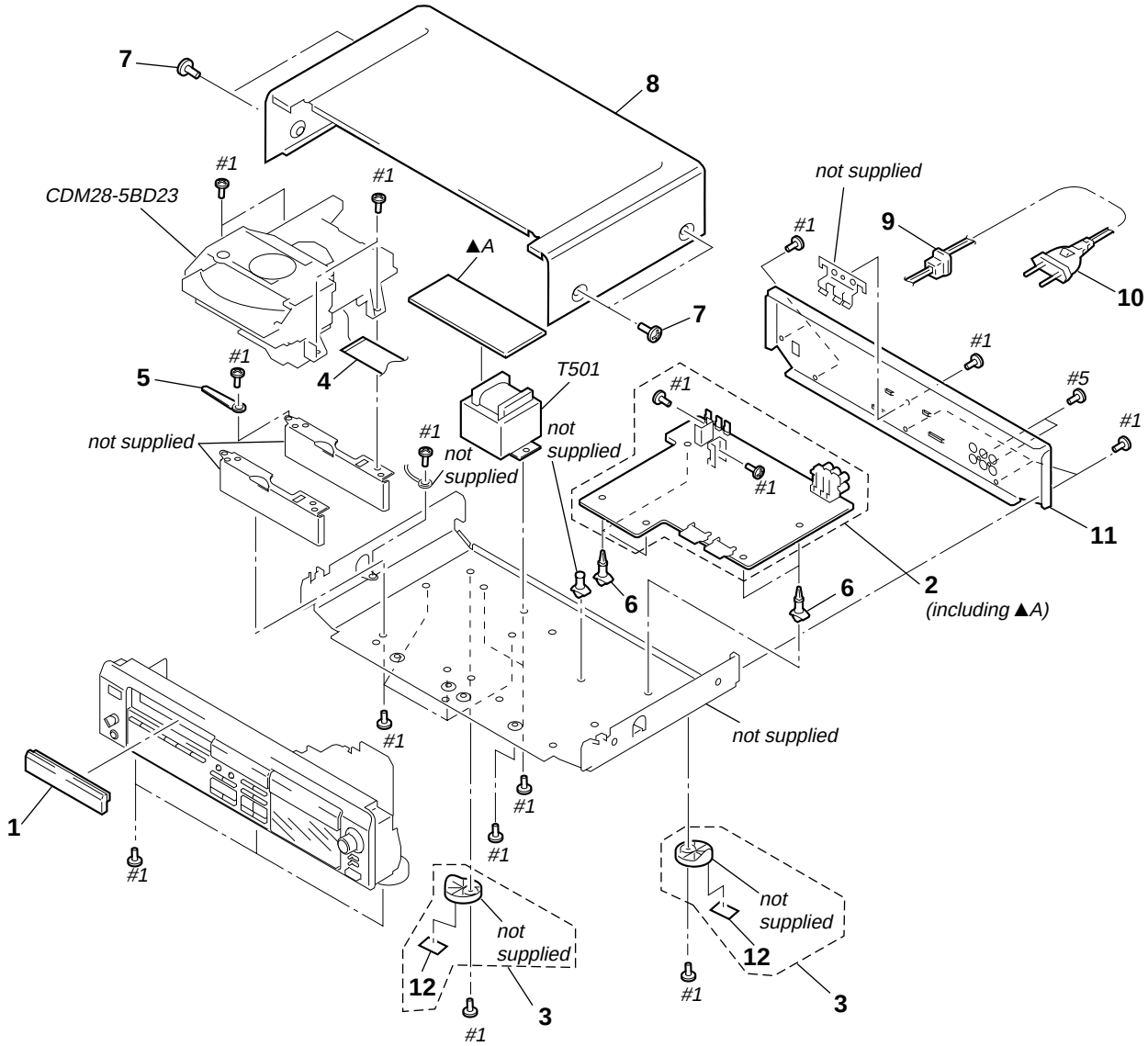
NOTE :

- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked " * "are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

7-1. CHASSIS SECTION

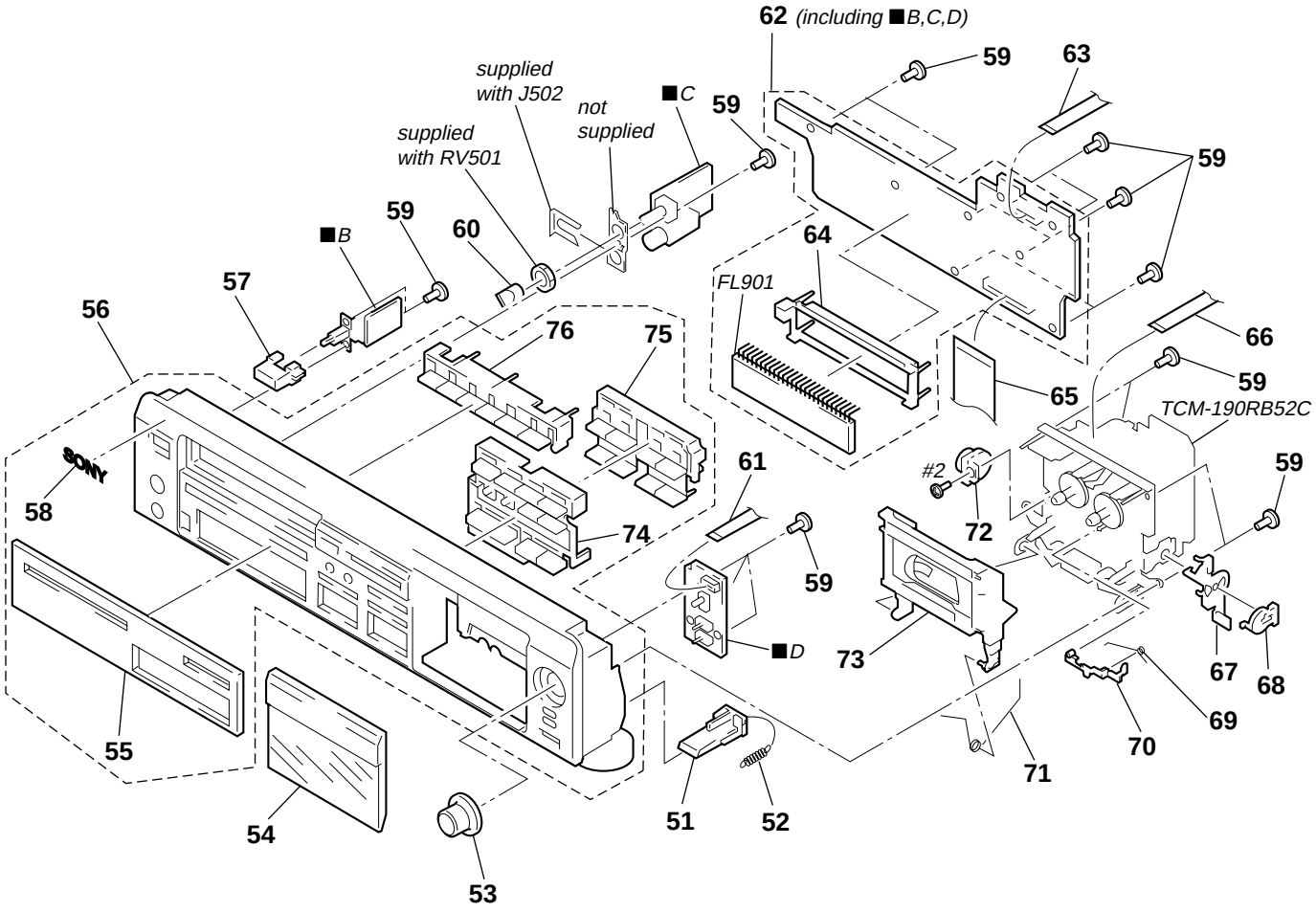
▲A : TRANSFORMER board



Ref. No.	Part No.	Description	Remark
1	3-010-294-01	PANEL, LOADING	
* 2	A-2007-704-A	MAIN BOARD, COMPLETE	
3	X-4947-207-2	FOOT ASSY (F50150S)	
4	1-782-313-11	WIRE (FLAT TYPE) (26 CORE)	
5	3-703-397-01	STOPPER, WIRING	
* 6	3-346-265-31	HOLDER, PC BOARD	
7	3-704-366-01	SCREW (CASE) (M3X8)	
* 8	3-931-432-01	CASE (410726)	
* 9	3-703-244-00	BUSHING (2104), CORD	
⚠10	1-575-651-21	CORD, POWER	
* 11	3-010-302-01	PANEL, BACK	
12	4-977-358-11	CUSHION (8X12.5)	
⚠T501	1-427-910-11	TRANSFORMER, POWER	

7-2. PANEL SECTION

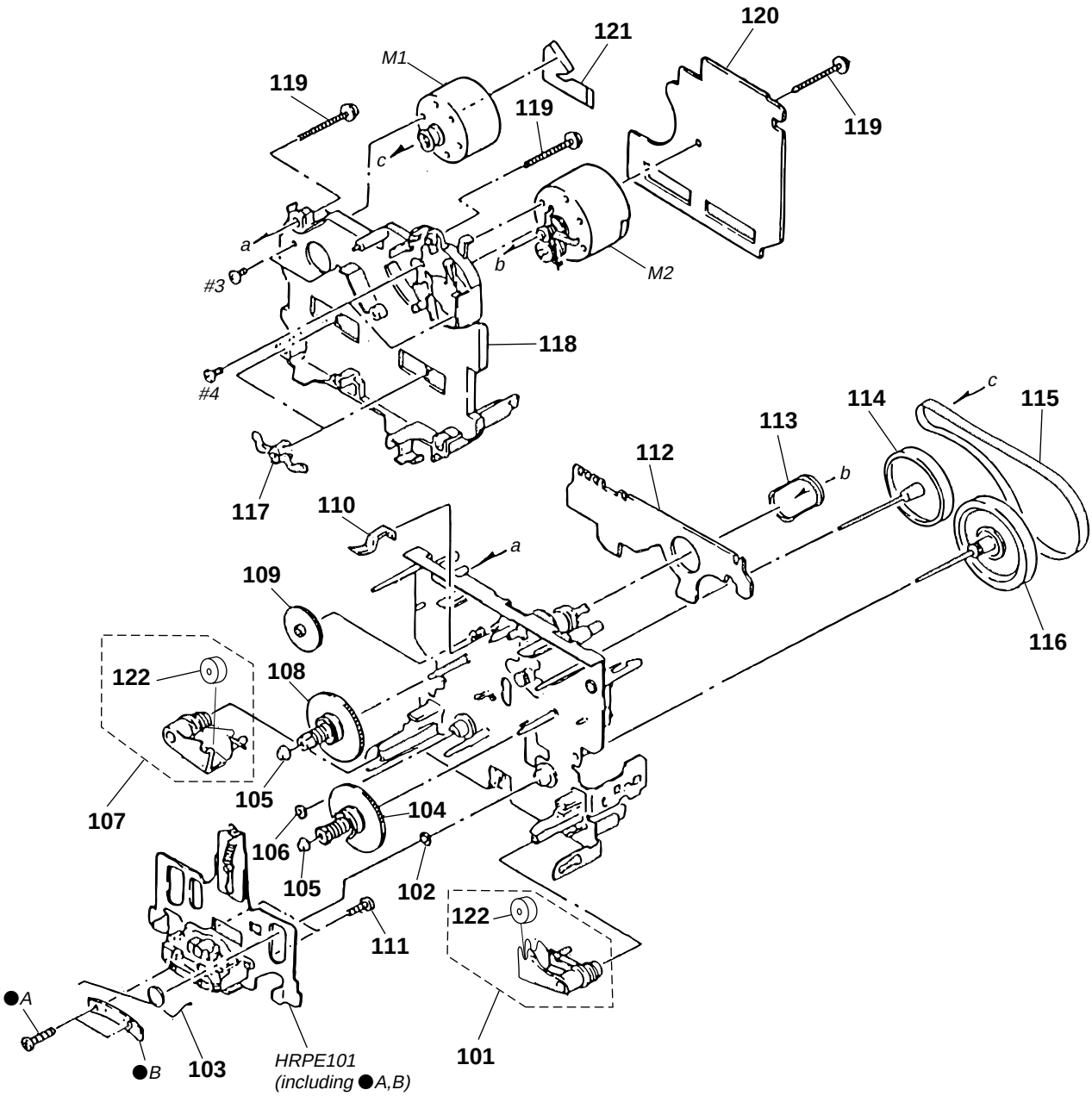
■*B : POWER SW board*
■*C : HP board*
■*D : VOL board*



Ref. No.	Part No.	Description	Remark
51	3-010-299-01	BUTTON (EJ)	
52	3-937-169-01	SPRING, TENSION	
53	3-931-430-11	KNOB (REC)	
54	X-3373-253-1	LID ASSY, CASSETTE	
55	3-010-300-01	WINDOW (FL)	
56	X-3373-251-1	PANEL ASSY, FRONT	
57	3-931-429-01	BUTTON (POWER)	
58	3-008-600-11	EMBLEM (5-AR), SONY	
59	4-951-620-01	SCREW (2.6X8), +BVTP	
60	3-931-378-01	KNOB (F10)	
61	1-765-319-11	WIRE (FLAT TYPE) (7 CORE)	
* 62	A-2007-705-A	PANEL BOARD, COMPLETE	
63	1-769-917-11	WIRE (FLAT TYPE) (9 CORE)	

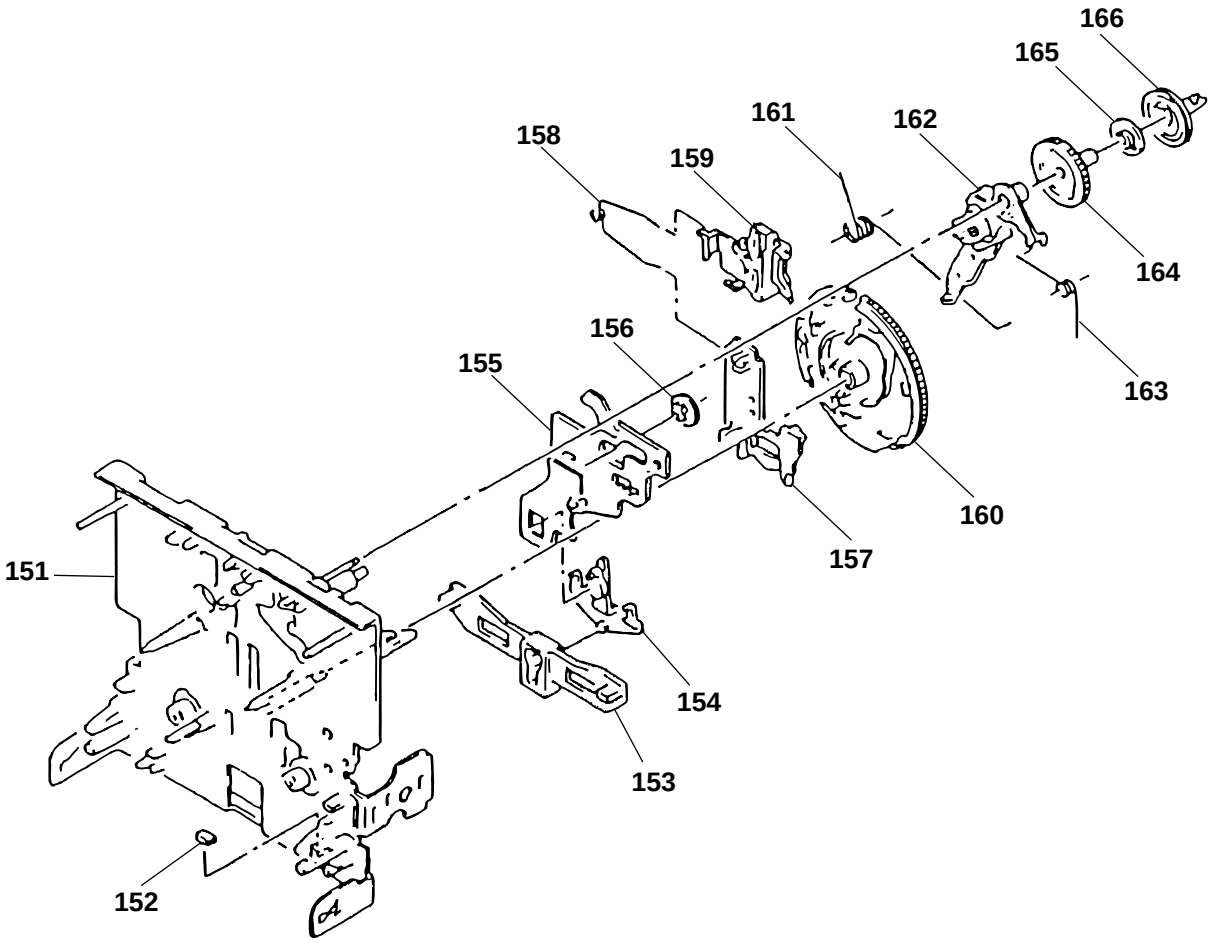
Ref. No.	Part No.	Description	Remark
* 64	3-923-303-01	HOLDER (FL TUBE)	
65	1-773-182-11	WIRE (FLAT TYPE) (23 CORE)	
66	1-775-370-11	WIRE (FLAT TYPE) (7 CORE)	
* 67	3-354-954-01	LEVER (LOCK LEVER R)	
68	3-354-957-01	JOINT (LOCK LEVER)	
69	3-354-962-01	SPRING (EJ SAFTY SPRING R)	
70	3-354-956-07	LEVER (EJ SAFTY LEVER R)	
71	4-959-232-11	SPRING (R), TORSION	
72	3-354-963-01	DAMPER	
73	X-4945-946-1	HOLDER (R) ASSY, CASSETTE	
74	3-010-295-01	BUTTON (A)	
75	3-010-296-01	BUTTON (B)	
76	3-010-297-01	BUTTON (C)	

7-3. MECHANISM SECTION-1
TCM-190RB52C



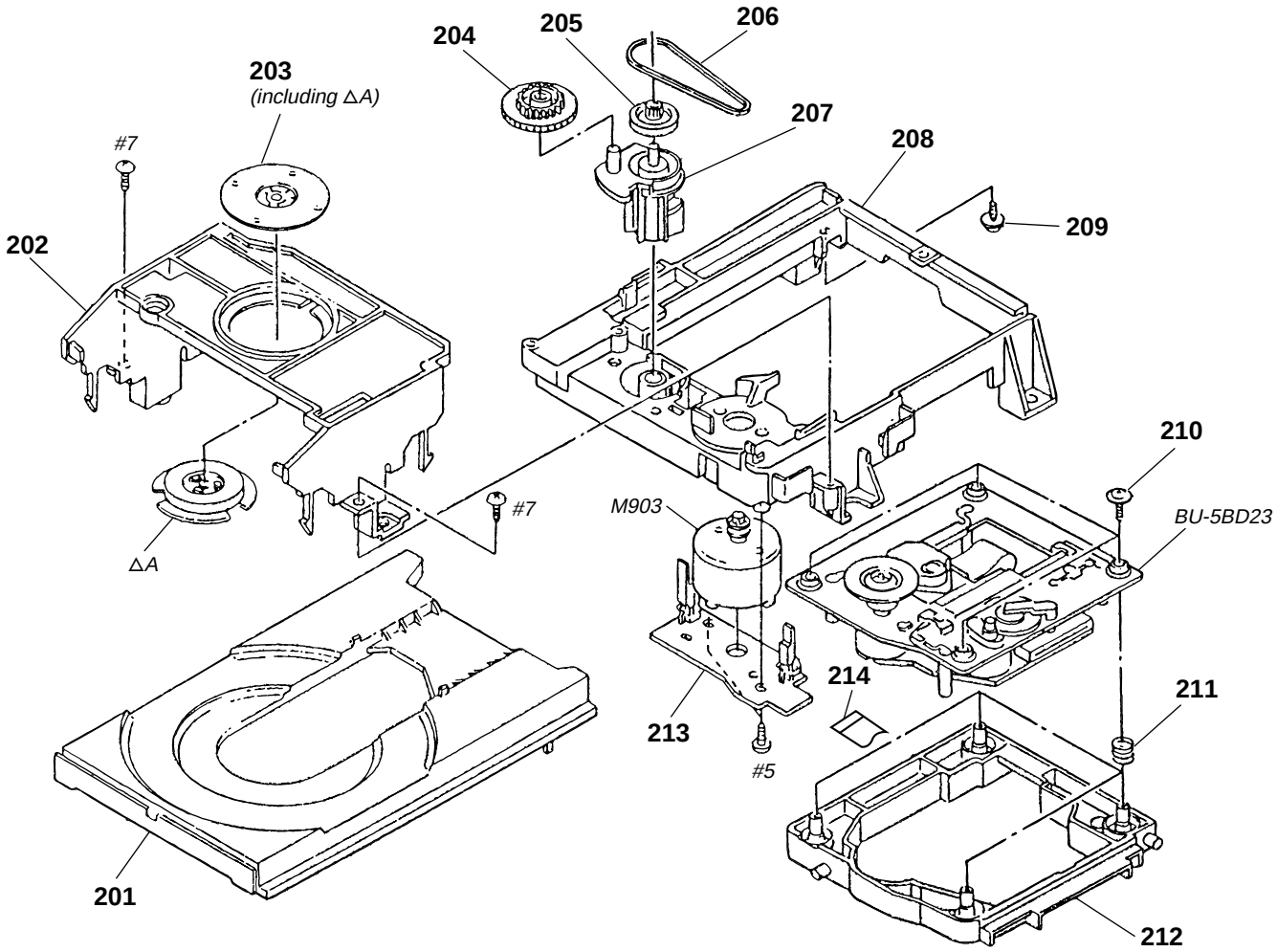
Ref. No.	Part No.	Description	Remark
101	X-3366-047-1	LEVER (PINCH F) ASSY	
102	3-356-713-01	WASHER	
103	3-907-362-01	SPRING, TORSION	
104	X-3366-970-1	TABLE ASSY, REEL	
105	3-362-308-01	CAP (REEL)	
106	3-356-714-01	WASHER	
107	X-3366-048-1	LEVER (PINCH R) ASSY	
108	X-3369-508-1	TABLE (C) ASSY, REEL	
109	3-359-424-01	GEAR (REV GEAR)	
110	3-359-430-01	SPRING(CASSETTE RETAINER),LEAF	
111	3-388-848-01	SCREW (P2X6) (B TIGHT)	
* 112	1-638-020-11	LEAF SW BOARD	
113	3-359-466-01	BELT (FR), SQUARE	
114	X-3367-630-1	FLYWHEEL (REV) ASSY	
115	3-359-417-01	BELT (FLAT), CAPSTAN	
116	X-3367-629-1	FLYWHEEL (FWD) ASSY	
117	3-575-321-00	RETAINER, THRUST, CAPSTAN	
118	3-359-436-11	BASE (THRUST RETAINER),FITTING	
119	3-359-414-01	SCREW (+PTPWH 2X23)	
* 120	A-2007-133-A	AUDIO BOARD, COMPLETE	
121	1-638-983-11	PC BOARD, MOTOR FLEXIBLE	
122	3-355-808-02	PINCH ROLLER	
M1	X-3365-377-2	MOTOR ASSY (CAPSTAN)	
M2	X-3363-501-2	MOTOR ASSY (REEL)	
HRPE101	A-2004-527-A	DECK ASSY, HEAD (PLAYBACK/RECORD/ERASE)	

7-4. MECHANISM SECTION-2
TCM-190RB52C



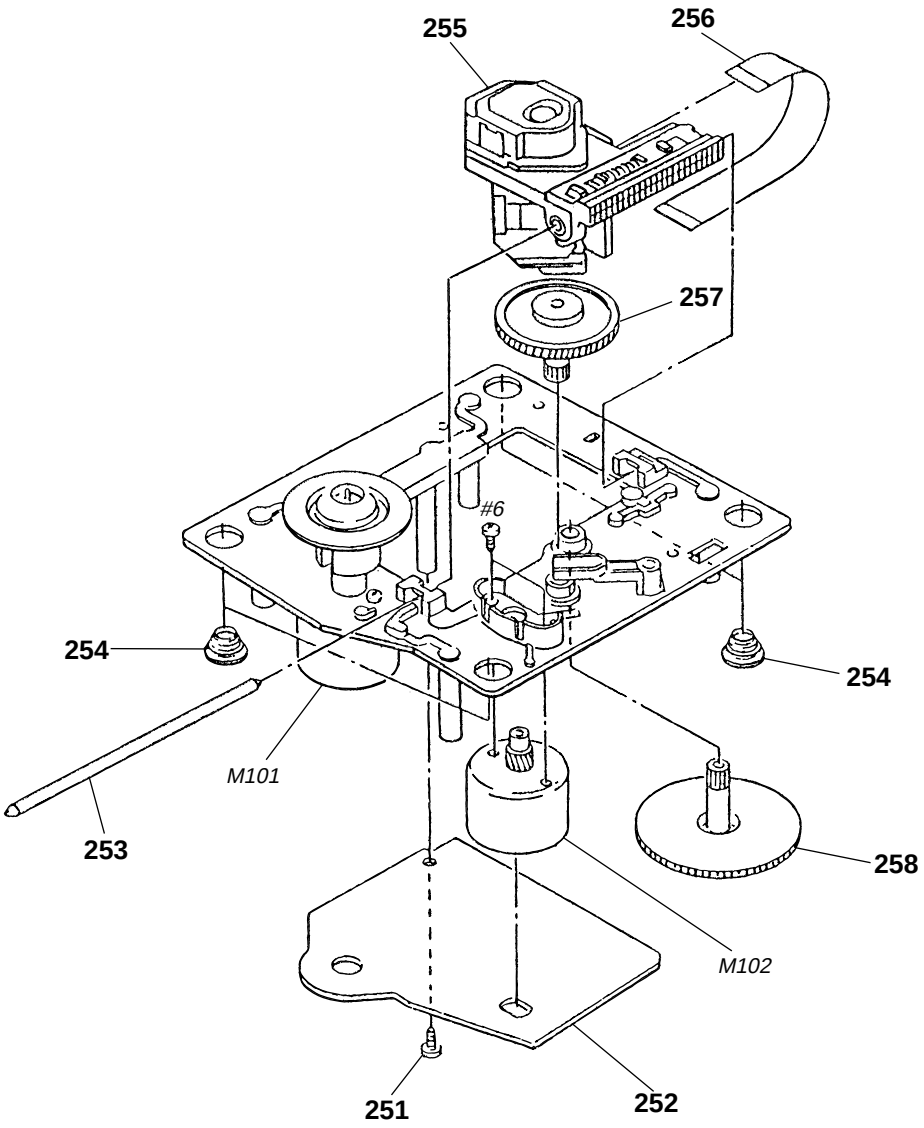
Ref. No.	Part No.	Description	Remark
151	X-3363-790-1	CHASSIS ASSY MECHANICAL	
152	3-359-469-01	SPACER	
153	3-359-425-01	SLIDER (REVERSE SLIDER)	
154	3-359-426-01	LEVER (REVERSE LEVER)	
155	3-359-415-11	SLIDER (TRIGGER SLIDER)	
156	3-359-448-01	GEAR (TRIGGER)	
157	3-359-427-01	SLIDER (LEVERSE SLIDER)	
158	3-359-454-01	SPRING, TORSION	
159	3-359-429-11	SLIDER (BRAKE PLATE)	
160	3-359-420-01	GEAR (CAM GEAR)	
161	3-359-456-01	SPRING(TRIGGER SPRING),TORSION	
162	X-3366-569-1	ARM ASSY, FR	
163	3-924-185-11	SPRING (FR ARM), TORSION	
164	3-359-419-11	GEAR (FR GEAR)	
165	3-359-421-01	CLUTCH (REEL DISK)	
166	3-359-418-01	PULLEY (FR PULLEY)	

7-5. CD MECHANISM SECTION-1
CDM28-5BD23



Ref. No.	Part No.	Description	Remark
201	4-960-836-01	TABLE, DISC	
202	4-960-835-01	HOLDER (M)	
203	1-452-719-11	MAGNET ASSY	
204	4-960-842-01	GEAR (P)	
205	4-960-841-01	PULLEY (S)	
206	4-927-649-01	BELT	
* 207	4-960-839-01	CAM	
208	4-960-838-03	BASE (MD)	
209	4-917-583-21	BRACKET, YOKE	
210	4-933-134-01	SCREW (+PTPWH M2.6X6)	
211	4-959-996-01	SPRING (932), COMPRESSION	
212	4-960-834-01	HOLDER (BU)	
* 213	1-650-836-11	LOADING BOARD	
214	1-751-806-11	WIRE (FLAT TYPE) (5 CORE)	
M903	A-4604-363-A	MOTOR (L) ASSY (LOADING)	

7-6. CD MECHANISM SECTION-2
BU-5BD23



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
251	4-951-620-01	SCREW (2.6X8), +BVTP	
* 252	A-4673-515-A	BD BOARD, COMPLETE	
253	4-917-565-01	SHAFT, SLED	
254	4-951-940-01	INSULATOR (BU)	
⚠255	8-848-379-31	OPTICAL PICK-UP KSS-213B/S-N	
256	1-769-069-11	WIRE (FLAT TYPE) (16 CORE)	
257	4-917-567-01	GEAR (M)	
258	4-917-564-01	GEAR (P), FLATNESS	
M101	X-4917-523-4	MOTOR ASSY (SPINDLE)	
M102	X-4917-504-1	MOTOR ASSY (SLED)	

AUDIO

SECTION 8
ELECTRICAL PARTS LIST

NOTE :
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms
  METAL : Metal-film resistor
  METAL OXIDE :Metal oxide-film resistor
  F : nonflammable
- Items marked " * "are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u : μ , for example :
  uA.... : μ A.... , uPA.... : μ PA....
  uPB.... : μ PB.... , uPC.... : μ PC....
  uPD.... : μ PD....
- CAPACITORS
  uF : μ F
- COILS
  uH : μ H

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description			Remark
*	A-2007-133-A	AUDIO BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C11	1-163-131-00	CERAMIC CHIP	390PF	5%	50V
C12	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C13	1-136-153-00	FILM	0.01uF	5%	50V
C14	1-126-177-11	ELECT	100uF	20%	10V
C15	1-124-234-00	ELECT	22uF	20%	16V
C16	1-136-434-11	FILM	120PF	5%	630V
C17	1-102-113-00	CERAMIC	390PF	10%	50V
C18	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C21	1-163-131-00	CERAMIC CHIP	390PF	5%	50V
C22	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C23	1-136-153-00	FILM	0.01uF	5%	50V
C24	1-126-177-11	ELECT	100uF	20%	10V
C25	1-124-234-00	ELECT	22uF	20%	16V
C26	1-136-434-11	FILM	120PF	5%	630V
C27	1-102-113-00	CERAMIC	390PF	10%	50V
C28	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C31	1-124-234-00	ELECT	22uF	20%	16V
C32	1-124-234-00	ELECT	22uF	20%	16V
C33	1-124-234-00	ELECT	22uF	20%	16V
C51	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V
C52	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V
C53	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C54	1-136-967-11	FILM	0.012uF	5%	100V
C56	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C57	1-164-346-11	CERAMIC CHIP	1uF		16V
C58	1-163-020-00	CERAMIC CHIP	0.0082uF	10%	50V
C72	1-109-889-11	ELECT	1uF	20%	50V
		< CONNECTOR >			
* CNJ31	1-580-782-11	CONNECTOR, BOARD TO BOARD			
* CNJ33	1-580-782-11	CONNECTOR, BOARD TO BOARD			
CNJ72	1-764-902-11	CONNECTOR, FFC/FPC 4P			
* CNP32	1-580-781-11	PIN, CONNECTOR (PC BOARD) 7P			
* CNP71	1-564-719-11	PIN, CONNECTOR (SMALL TYPE) 3P			
		< IC >			
IC31	8-759-249-21	IC uPC1330AGR			
IC32	8-759-106-02	IC uPC4570G2			
		< JUMPER RESISTOR >			
JW1	1-216-295-00	METAL CHIP	0	5%	1/10W
JW2	1-216-295-00	METAL CHIP	0	5%	1/10W
JW11	1-216-296-00	METAL CHIP	0	5%	1/8W
JW12	1-216-296-00	METAL CHIP	0	5%	1/8W
JW13	1-216-296-00	METAL CHIP	0	5%	1/8W
JW14	1-216-296-00	METAL CHIP	0	5%	1/8W
JW15	1-216-296-00	METAL CHIP	0	5%	1/8W
JW16	1-216-296-00	METAL CHIP	0	5%	1/8W
JW17	1-216-296-00	METAL CHIP	0	5%	1/8W
JW18	1-216-296-00	METAL CHIP	0	5%	1/8W
JW19	1-216-296-00	METAL CHIP	0	5%	1/8W
JW20	1-216-296-00	METAL CHIP	0	5%	1/8W
JW21	1-216-296-00	METAL CHIP	0	5%	1/8W
JW22	1-216-296-00	METAL CHIP	0	5%	1/8W
JW23	1-216-296-00	METAL CHIP	0	5%	1/8W
JW24	1-216-296-00	METAL CHIP	0	5%	1/8W
JW25	1-216-296-00	METAL CHIP	0	5%	1/8W
JW26	1-216-296-00	METAL CHIP	0	5%	1/8W
JW27	1-216-296-00	METAL CHIP	0	5%	1/8W
		< COIL >			
L11	1-410-780-11	INDUCTOR	27mH		
L21	1-410-780-11	INDUCTOR	27mH		
		< TRANSISTOR >			
Q51	8-729-111-29	TRANSISTOR	2SD1616A-K		
Q52	8-729-111-29	TRANSISTOR	2SD1616A-K		
Q53	8-729-111-29	TRANSISTOR	2SD1616A-K		
Q71	8-729-216-22	TRANSISTOR	2SA1162-G		
		< RESISTOR >			
R11	1-216-099-00	METAL CHIP	120K	5%	1/10W
R12	1-216-033-00	METAL CHIP	220	5%	1/10W
R13	1-216-081-00	METAL CHIP	22K	5%	1/10W
R14	1-216-076-00	METAL CHIP	13K	5%	1/10W
R15	1-216-107-00	METAL CHIP	270K	5%	1/10W
R16	1-249-430-11	CARBON	12K	5%	1/4W
R21	1-216-099-00	METAL CHIP	120K	5%	1/10W
R22	1-216-033-00	METAL CHIP	220	5%	1/10W
R23	1-216-081-00	METAL CHIP	22K	5%	1/10W
R24	1-216-076-00	METAL CHIP	13K	5%	1/10W
R25	1-216-107-00	METAL CHIP	270K	5%	1/10W
R26	1-249-430-11	CARBON	12K	5%	1/4W
R31	1-216-033-00	METAL CHIP	220	5%	1/10W
R32	1-216-033-00	METAL CHIP	220	5%	1/10W
R33	1-216-073-00	METAL CHIP	10K	5%	1/10W
R41	1-249-393-11	CARBON	10	5%	1/4W
R42	1-249-393-11	CARBON	10	5%	1/4W

Ref. No.	Part No.	Description			Remark
R51	1-216-091-00	METAL CHIP	56K	5%	1/10W
R52	1-216-091-00	METAL CHIP	56K	5%	1/10W
R53	1-216-073-00	METAL CHIP	10K	5%	1/10W
R54	1-216-309-00	METAL CHIP	5.6	5%	1/10W
R55	1-216-309-00	METAL CHIP	5.6	5%	1/10W
R56	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R71	1-216-082-00	METAL GLAZE	24K	5%	1/10W
R72	1-216-081-00	METAL CHIP	22K	5%	1/10W
R73	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R74	1-216-089-91	METAL GLAZE	47K	5%	1/10W
		< VARIABLE RESISTOR >			
RV11	1-241-761-11	RES, ADJ, CARBON 1K (PLAYBACK LEVEL L)			
RV12	1-238-551-11	RES, ADJ, CARBON 220K (RECORD BIAS L)			
RV21	1-241-761-11	RES, ADJ, CARBON 1K (PLAYBACK LEVEL R)			
RV22	1-238-551-11	RES, ADJ, CARBON 220K (RECORD BIAS R)			
RV71	1-241-630-11	RES, ADJ, CARBON 10K (TAPE SPEED, NORMAL)			
RV72	1-241-630-11	RES, ADJ, CARBON 10K (TAPE SPEED, HIGHT)			
		< TRANSFORMER >			
T51	1-429-290-11	TRANSFORMER, BIAS OSCILLATION			
**********					
*	A-4673-515-A	BD BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C101	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C102	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C103	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C105	1-135-155-21	TANTALUM CHIP	4.7uF	10%	16V
C106	1-164-346-11	CERAMIC CHIP	1uF		16V
C107	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C108	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C109	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V
C110	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C111	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C112	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C113	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C115	1-126-607-11	ELECT CHIP	47uF	20%	4V
C116	1-126-607-11	ELECT CHIP	47uF	20%	4V
C117	1-126-209-11	ELECT	100uF	20%	4V
C118	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C119	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C120	1-135-216-11	TANTALUM CHIP	10uF	20%	10V
C123	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C124	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C133	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C151	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C153	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C154	1-164-336-11	CERAMIC CHIP	0.33uF		25V
C156	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C157	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V
C159	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C161	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C181	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C182	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C183	1-135-156-21	TANTALUM CHIP	6.8uF	10%	10V
C184	1-135-156-21	TANTALUM CHIP	6.8uF	10%	10V
C185	1-135-155-21	TANTALUM CHIP	4.7uF	10%	16V
C186	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C187	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C188	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C189	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C191	1-163-092-00	CERAMIC CHIP	9PF	0.25PF	50V
C192	1-163-092-00	CERAMIC CHIP	9PF	0.25PF	50V
C193	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C194	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C195	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C196	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C197	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C198	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C199	1-164-232-11	CERAMIC CHIP	0.01uF		50V
		< CONNECTOR >			
CN101	1-774-794-11	CONNECTOR, FFC/FPC 26P			
CN102	1-770-014-11	CONNECTOR, FFC/FPC 16P			
		< IC >			
IC101	8-752-369-78	IC CXD2545Q			
IC102	8-759-176-09	IC BA6392FP			
IC103	8-752-072-45	IC CXA1821M-T6			
IC104	8-752-367-61	IC CXD2565AM			
		< COIL >			
L101	1-414-234-11	INDUCTOR, FERRITE BEAD			
L102	1-414-234-11	INDUCTOR, FERRITE BEAD			
L103	1-414-234-11	INDUCTOR, FERRITE BEAD			
L104	1-216-003-11	METAL GLAZE	12	5%	1/10W
L105	1-216-295-00	METAL CHIP	0	5%	1/10W
L106	1-414-234-11	INDUCTOR, FERRITE BEAD			
L107	1-216-295-00	METAL CHIP	0	5%	1/10W
L108	1-414-234-11	INDUCTOR, FERRITE BEAD			
L109	1-414-234-11	INDUCTOR, FERRITE BEAD			
L110	1-216-295-00	METAL CHIP	0	5%	1/10W
L111	1-216-295-00	METAL CHIP	0	5%	1/10W
L112	1-216-295-00	METAL CHIP	0	5%	1/10W
		< TRANSISTOR >			
Q101	8-729-010-08	TRANSISTOR MSB710-R			
		< RESISTOR >			
R101	1-216-077-00	METAL CHIP	15K	5%	1/10W
R102	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R103	1-216-077-00	METAL CHIP	15K	5%	1/10W
R104	1-216-085-00	METAL CHIP	33K	5%	1/10W
R105	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R106	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R107	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R108	1-216-073-00	METAL CHIP	10K	5%	1/10W
R109	1-216-121-91	METAL GLAZE	1M	5%	1/10W
R110	1-216-025-91	METAL GLAZE	100	5%	1/10W
R112	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R123	1-216-073-00	METAL CHIP	10K	5%	1/10W
R124	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R125	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R126	1-216-049-91	METAL GLAZE	1K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R127	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R131	1-216-037-00	METAL CHIP	330	5%	1/10W
R132	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R141	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R142	1-216-081-00	METAL CHIP	22K	5%	1/10W
R143	1-216-103-00	METAL CHIP	180K	5%	1/10W
R144	1-216-103-00	METAL CHIP	180K	5%	1/10W
R146	1-216-073-00	METAL CHIP	10K	5%	1/10W
R147	1-216-081-00	METAL CHIP	22K	5%	1/10W
R148	1-216-001-00	METAL CHIP	10	5%	1/10W
R149	1-216-003-11	METAL GLAZE	12	5%	1/10W
R150	1-216-295-00	METAL CHIP	0	5%	1/10W
R158	1-216-111-91	METAL GLAZE	390K	5%	1/10W
R159	1-216-101-00	METAL CHIP	150K	5%	1/10W
R160	1-216-295-00	METAL CHIP	0	5%	1/10W
R161	1-216-308-00	METAL CHIP	4.7	5%	1/10W
R162	1-216-101-00	METAL CHIP	150K	5%	1/10W
R181	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R182	1-216-080-00	METAL CHIP	20K	5%	1/10W
R183	1-216-080-00	METAL CHIP	20K	5%	1/10W
R184	1-216-080-00	METAL CHIP	20K	5%	1/10W
R185	1-216-080-00	METAL CHIP	20K	5%	1/10W
R187	1-216-035-00	METAL CHIP	270	5%	1/10W
R188	1-216-121-91	METAL GLAZE	1M	5%	1/10W
		< SWITCH >			
S101	1-572-085-11	SWITCH, LEAF (LIMIT)			
		< VIBRATOR >			
X101	1-579-904-11	VIBRATOR, CRYSTAL (33.8MHz)			
**********					
*	1-638-020-11	LEAF SW BOARD			
		**********			
		< CONNECTOR >			
CNP81	1-695-368-31	PIN, CONNECTOR (PC BOARD) 7P			
		< IC >			
IC81	8-749-924-10	IC PHONT REFLECTOR NJL5165K-B(H1)			
		< RESISTOR >			
R81	1-249-414-11	CARBON	560	5%	1/4W
R82	1-247-818-11	CARBON	300	5%	1/4W
R83	1-247-834-11	CARBON	1.3K	5%	1/4W
R84	1-249-417-11	CARBON	1K	5%	1/4W
R85	1-249-408-11	CARBON	180	5%	1/4W
		< SWITCH >			
S81	1-571-958-11	SWITCH, PUSH (1 KEY) (STOP DET)			
S82	1-571-281-21	SWITCH, LEAF (CrO2 DET)			
S83	1-571-281-21	SWITCH, LEAF (METAL DET)			
S84	1-571-281-21	SWITCH, LEAF (REC PROOF,SIDE A)			
S85	1-571-281-21	SWITCH, LEAF (REC PROOF,SIDE B)			
S86	1-571-281-21	SWITCH, LEAF (HALF DET)			
**********					

Ref. No.	Part No.	Description			Remark
*	1-650-836-11	LOADING BOARD			
		**********			
		< CONNECTOR >			
CN291	1-580-918-11	HOUSING, CONNECTOR 5P			
		< SWITCH >			
S291	1-572-086-11	SWITCH, LEAF (LOAD OUT)			
S292	1-572-086-11	SWITCH, LEAF (LOAD IN)			
**********					
*	A-2007-704-A	MAIN BOARD, COMPLETE			
		**********			
		TRANSFORMER BOARD			
		**********			
	7-685-871-01	SCREW +BVTT 3X6 (S)			
		< CAPACITOR >			
C101	1-136-157-00	FILM	0.022uF	5%	50V
C102	1-106-353-00	MYLAR	0.0027uF	5%	50V
C103	1-106-351-00	MYLAR	2200PF	5%	200V
C104	1-126-964-11	ELECT	10uF	20%	50V
C105	1-126-964-11	ELECT	10uF	20%	50V
C106	1-126-964-11	ELECT	10uF	20%	50V
C107	1-136-165-00	FILM	0.1uF	5%	50V
C108	1-136-163-00	FILM	0.068uF	5%	50V
C112	1-126-959-11	ELECT	0.47uF	20%	50V
C113	1-126-963-11	ELECT	4.7uF	20%	50V
C114	1-106-353-00	MYLAR	0.0027uF	5%	50V
C115	1-126-961-11	ELECT	2.2uF	20%	50V
C116	1-161-494-00	CERAMIC	0.022uF		25V
C131	1-126-960-11	ELECT	1uF	20%	50V
C134	1-162-291-31	CERAMIC	560PF	10%	50V
C171	1-162-280-31	CERAMIC	82PF	10%	50V
C172	1-162-280-31	CERAMIC	82PF	10%	50V
C173	1-130-480-00	MYLAR	0.0056uF	5%	50V
C174	1-106-343-00	MYLAR	1000PF	5%	200V
C175	1-104-664-11	ELECT	47uF	20%	25V
C201	1-136-157-00	FILM	0.022uF	5%	50V
C202	1-106-353-00	MYLAR	0.0027uF	5%	50V
C203	1-106-351-00	MYLAR	2200PF	5%	200V
C204	1-126-964-11	ELECT	10uF	20%	50V
C205	1-126-964-11	ELECT	10uF	20%	50V
C206	1-126-964-11	ELECT	10uF	20%	50V
C207	1-136-165-00	FILM	0.1uF	5%	50V
C208	1-136-163-00	FILM	0.068uF	5%	50V
C212	1-126-959-11	ELECT	0.47uF	20%	50V
C213	1-126-963-11	ELECT	4.7uF	20%	50V
C214	1-106-353-00	MYLAR	0.0027uF	5%	50V
C215	1-126-961-11	ELECT	2.2uF	20%	50V
C216	1-161-494-00	CERAMIC	0.022uF		25V
C231	1-126-960-11	ELECT	1uF	20%	50V
C234	1-162-291-31	CERAMIC	560PF	10%	50V
C271	1-162-280-31	CERAMIC	82PF	10%	50V
C272	1-162-280-31	CERAMIC	82PF	10%	50V
C273	1-130-480-00	MYLAR	0.0056uF	5%	50V
C274	1-106-343-00	MYLAR	1000PF	5%	200V
C275	1-104-664-11	ELECT	47uF	20%	25V

Ref. No.	Part No.	Description			Remark
C501	1-126-964-11	ELECT	10uF	20%	50V
C502	1-126-923-11	ELECT	220uF	20%	10V
C503	1-104-664-11	ELECT	47uF	20%	25V
C511	1-162-211-31	CERAMIC	33PF	5%	50V
C512	1-162-217-31	CERAMIC	56PF	5%	50V
C513	1-126-961-11	ELECT	2.2uF	20%	50V
C514	1-161-494-00	CERAMIC	0.022uF		25V
C515	1-126-961-11	ELECT	2.2uF	20%	50V
C517	1-126-767-11	ELECT	1000uF	20%	16V
C524	1-126-960-11	ELECT	1uF	20%	50V
C531	1-126-916-11	ELECT	1000uF	20%	6.3V
C541	1-136-175-00	FILM	0.68uF	5%	50V
C542	1-136-168-00	FILM	0.18uF	5%	50V
C543	1-136-153-00	FILM	0.01uF	5%	50V
C544	1-126-962-11	ELECT	3.3uF	20%	50V
C545	1-126-964-11	ELECT	10uF	20%	50V
C701	1-126-943-11	ELECT	2200uF	20%	25V
C702	1-161-494-00	CERAMIC	0.022uF		25V
C703	1-126-923-11	ELECT	220uF	20%	10V
C704	1-164-159-11	CERAMIC	0.1uF		50V
C705	1-126-964-11	ELECT	10uF	20%	50V
C706	1-126-916-11	ELECT	1000uF	20%	6.3V
C707	1-126-768-11	ELECT	2200uF	20%	16V
C708	1-126-768-11	ELECT	2200uF	20%	16V
C709	1-104-664-11	ELECT	47uF	20%	25V
C710	1-126-926-11	ELECT	1000uF	20%	10V
C711	1-126-926-11	ELECT	1000uF	20%	10V
C712	1-126-968-11	ELECT	100uF	20%	50V
C713	1-104-664-11	ELECT	47uF	20%	25V
C714	1-161-494-00	CERAMIC	0.022uF		25V
C715	1-126-960-11	ELECT	1uF	20%	50V
C719	1-126-963-11	ELECT	4.7uF	20%	50V
C720	1-126-963-11	ELECT	4.7uF	20%	50V
C721	1-126-935-11	ELECT	470uF	20%	6.3V
C723	1-126-963-11	ELECT	4.7uF	20%	50V
C801	1-126-933-11	ELECT	100uF	20%	10V
C802	1-161-494-00	CERAMIC	0.022uF		25V
C803	1-126-963-11	ELECT	4.7uF	20%	50V
C804	1-126-964-11	ELECT	10uF	20%	50V
C805	1-162-288-31	CERAMIC	330PF	10%	50V
C806	1-164-159-11	CERAMIC	0.1uF		50V
C807	1-162-306-11	CERAMIC	0.01uF	20%	16V
C808	1-161-494-00	CERAMIC	0.022uF		25V
C809	1-164-159-11	CERAMIC	0.1uF		50V
C810	1-164-159-11	CERAMIC	0.1uF		50V
C811	1-161-494-00	CERAMIC	0.022uF		25V
C812	1-161-494-00	CERAMIC	0.022uF		25V
C813	1-161-494-00	CERAMIC	0.022uF		25V
C814	1-161-494-00	CERAMIC	0.022uF		25V
C815	1-161-494-00	CERAMIC	0.022uF		25V

< CONNECTOR >

*	CN801	1-568-826-11	SOCKET, CONNECTOR 7P	
	CN803	1-779-512-11	CONNECTOR, FFC/FPC 26P	
*	CN804	1-568-828-11	SOCKET, CONNECTOR 9P	
*	CN805	1-568-839-11	SOCKET, CONNECTOR 23P	
*	CN806	1-568-826-11	SOCKET, CONNECTOR 7P	
*	CN807	1-568-955-11	PIN, CONNECTOR 6P	
*	CNP501	1-568-954-11	PIN, CONNECTOR 5P	
*	CNP503	1-691-916-11	CONNECTOR, BOARD TO BOARD	
*	CNP504	1-691-916-11	CONNECTOR, BOARD TO BOARD	
	CNP701	1-564-524-11	PLUG, CONNECTOR 9P	
*	CNP702	1-580-230-31	PIN, CONNECTOR (PC BOARD) 2P	

< DIODE >

D131	8-719-987-63	DIODE	1N4148M
D132	8-719-987-63	DIODE	1N4148M
D141	8-719-987-63	DIODE	1N4148M
D142	8-719-987-63	DIODE	1N4148M
D143	8-719-987-63	DIODE	1N4148M
D231	8-719-987-63	DIODE	1N4148M
D232	8-719-987-63	DIODE	1N4148M
D241	8-719-987-63	DIODE	1N4148M
D242	8-719-987-63	DIODE	1N4148M
D243	8-719-987-63	DIODE	1N4148M
D501	8-719-987-63	DIODE	1N4148M
D502	8-719-987-63	DIODE	1N4148M
D511	8-719-987-63	DIODE	1N4148M
D541	8-719-987-63	DIODE	1N4148M
D701	8-719-200-82	DIODE	11ES2
D702	8-719-200-82	DIODE	11ES2
D703	8-719-200-82	DIODE	11ES2
D704	8-719-200-82	DIODE	11ES2
D705	8-719-024-99	DIODE	11ES2-NTA2B
D706	8-719-024-99	DIODE	11ES2-NTA2B
D707	8-719-024-99	DIODE	11ES2-NTA2B
D708	8-719-024-99	DIODE	11ES2-NTA2B
D709	8-719-987-63	DIODE	1N4148M
D710	8-719-987-63	DIODE	1N4148M
D711	8-719-987-63	DIODE	1N4148M
D712	8-719-934-41	DIODE	HZS6B2LT2
D713	8-719-933-33	DIODE	HZS6A1L
D714	8-719-933-33	DIODE	HZS6A1L
D715	8-719-024-99	DIODE	11ES2-NTA2B
D716	8-719-987-63	DIODE	1N4148M
D717	8-719-987-63	DIODE	1N4148M
D718	8-719-933-50	DIODE	HZS7C2L
D719	8-719-933-33	DIODE	HZS6A1L
D720	8-719-987-63	DIODE	1N4148M
D721	8-719-933-33	DIODE	HZS6A1L
D801	8-719-010-29	DIODE	UZ-4.3BSB
D802	8-719-933-33	DIODE	HZS6A1L

< IC >

IC501	8-752-060-46	IC	CXA1561S
IC502	8-752-070-67	IC	CXA1597P
IC503	8-759-635-26	IC	M5283P
IC504	8-759-000-49	IC	MC14066BCP
IC505	8-759-000-49	IC	MC14066BCP
IC506	8-759-634-51	IC	M5218AP
IC507	8-759-634-51	IC	M5218AP
IC508	8-759-634-51	IC	M5218AP
IC509	8-759-000-48	IC	MC14052BCP
IC510	8-759-634-51	IC	M5218AP
IC601	8-759-634-51	IC	M5218AP
IC602	8-759-634-51	IC	M5218AP
IC701	8-759-634-51	IC	M5218AP
IC702	8-759-071-48	IC	TA7807S
IC703	8-759-061-65	IC	LA5602

MAIN TRANSFORMER

Ref. No.	Part No.	Description	Remark
IC801	8-759-453-42	IC uPD78044FGF-029-3B9	
IC802	8-759-165-82	IC PST600E-T	
IC803	8-759-000-48	IC MC14052BCP	
IC805	8-759-803-42	IC LA6500-FA	
IC806	8-759-822-09	IC LB1641	
		< JACK >	
J501	1-691-887-11	JACK, PIN 6P (TAPE IN/OUT, CD OUT)	
		< COIL >	
L801	1-410-322-11	INDUCTOR 3.3uH	
L802	1-410-322-11	INDUCTOR 3.3uH	
		< FILTER >	
LPF101	1-233-875-11	FILTER, LOW PASS	
LPF201	1-233-875-11	FILTER, LOW PASS	
		< TRANSISTOR >	
Q101	8-729-900-89	TRANSISTOR DTC144ES	
Q102	8-729-900-80	TRANSISTOR DTC114ES	
Q111	8-729-900-80	TRANSISTOR DTC114ES	
Q131	8-729-922-37	TRANSISTOR 2SD2144S	
Q132	8-729-922-37	TRANSISTOR 2SD2144S	
Q133	8-729-422-57	TRANSISTOR UN4111	
Q141	8-729-900-74	TRANSISTOR DTC143TS	
Q142	8-729-900-74	TRANSISTOR DTC143TS	
Q201	8-729-900-89	TRANSISTOR DTC144ES	
Q202	8-729-900-80	TRANSISTOR DTC114ES	
Q211	8-729-900-80	TRANSISTOR DTC114ES	
Q231	8-729-922-37	TRANSISTOR 2SD2144S	
Q232	8-729-922-37	TRANSISTOR 2SD2144S	
Q233	8-729-422-57	TRANSISTOR UN4111	
Q241	8-729-900-74	TRANSISTOR DTC143TS	
Q242	8-729-900-74	TRANSISTOR DTC143TS	
Q502	8-729-900-80	TRANSISTOR DTC114ES	
Q503	8-729-900-80	TRANSISTOR DTC114ES	
Q505	8-729-900-65	TRANSISTOR DTA144ES	
Q506	8-729-900-65	TRANSISTOR DTA144ES	
Q507	8-729-900-80	TRANSISTOR DTC114ES	
Q511	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q512	8-729-900-80	TRANSISTOR DTC114ES	
Q531	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q701	8-729-141-83	TRANSISTOR 2SB1094-LK	
Q702	8-729-119-78	TRANSISTOR 2SC403SP-51	
Q703	8-729-900-74	TRANSISTOR DTC143TS	
Q704	8-729-900-74	TRANSISTOR DTC143TS	
Q705	8-729-141-83	TRANSISTOR 2SB1094-LK	
Q706	8-729-209-15	TRANSISTOR 2SD2012	
Q707	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q708	8-729-140-04	TRANSISTOR 2SB1116A-L	
Q709	8-729-900-65	TRANSISTOR DTA144ES	
Q710	8-729-900-85	TRANSISTOR DTC144WS	
Q802	8-729-801-93	TRANSISTOR 2SD1387	
Q803	8-729-900-80	TRANSISTOR DTC114ES	
		< RESISTOR >	
R100	1-249-433-11	CARBON 22K 5% 1/4W	
R101	1-249-421-11	CARBON 2.2K 5% 1/4W	
R102	1-247-843-11	CARBON 3.3K 5% 1/4W	
R103	1-247-843-11	CARBON 3.3K 5% 1/4W	
R104	1-249-424-11	CARBON 3.9K 5% 1/4W	
R105	1-247-887-00	CARBON 220K 5% 1/4W	
R106	1-249-417-11	CARBON 1K 5% 1/4W	
R107	1-249-429-11	CARBON 10K 5% 1/4W	
R111	1-249-429-11	CARBON 10K 5% 1/4W	
R112	1-247-843-11	CARBON 3.3K 5% 1/4W	
R113	1-247-843-11	CARBON 3.3K 5% 1/4W	
R114	1-249-424-11	CARBON 3.9K 5% 1/4W	
R115	1-249-441-11	CARBON 100K 5% 1/4W	
R116	1-247-887-00	CARBON 220K 5% 1/4W	
R131	1-249-417-11	CARBON 1K 5% 1/4W	
R132	1-249-421-11	CARBON 2.2K 5% 1/4W	
R133	1-249-437-11	CARBON 47K 5% 1/4W	
R134	1-249-421-11	CARBON 2.2K 5% 1/4W	
R135	1-249-417-11	CARBON 1K 5% 1/4W	
R136	1-249-421-11	CARBON 2.2K 5% 1/4W	
R137	1-249-433-11	CARBON 22K 5% 1/4W	
R138	1-249-417-11	CARBON 1K 5% 1/4W	
R139	1-247-887-00	CARBON 220K 5% 1/4W	
R141	1-249-435-11	CARBON 33K 5% 1/4W	
R142	1-249-441-11	CARBON 100K 5% 1/4W	
R161	1-249-441-11	CARBON 100K 5% 1/4W	
R162	1-247-868-11	CARBON 36K 5% 1/4W	
R166	1-247-807-31	CARBON 100 5% 1/4W	
R171	1-247-852-11	CARBON 7.5K 5% 1/4W	
R172	1-247-852-11	CARBON 7.5K 5% 1/4W	
R173	1-249-434-11	CARBON 27K 5% 1/4W	
R174	1-249-434-11	CARBON 27K 5% 1/4W	
R175	1-249-419-11	CARBON 1.5K 5% 1/4W	
R176	1-249-419-11	CARBON 1.5K 5% 1/4W	
R177	1-249-441-11	CARBON 100K 5% 1/4W	
R200	1-249-433-11	CARBON 22K 5% 1/4W	
R201	1-249-421-11	CARBON 2.2K 5% 1/4W	
R202	1-247-843-11	CARBON 3.3K 5% 1/4W	
R203	1-247-843-11	CARBON 3.3K 5% 1/4W	
R204	1-249-424-11	CARBON 3.9K 5% 1/4W	
R205	1-247-887-00	CARBON 220K 5% 1/4W	
R206	1-249-417-11	CARBON 1K 5% 1/4W	
R207	1-249-429-11	CARBON 10K 5% 1/4W	
R211	1-249-429-11	CARBON 10K 5% 1/4W	
R212	1-247-843-11	CARBON 3.3K 5% 1/4W	
R213	1-247-843-11	CARBON 3.3K 5% 1/4W	
R214	1-249-424-11	CARBON 3.9K 5% 1/4W	
R215	1-249-441-11	CARBON 100K 5% 1/4W	
R216	1-247-887-00	CARBON 220K 5% 1/4W	
R231	1-249-417-11	CARBON 1K 5% 1/4W	
R232	1-249-421-11	CARBON 2.2K 5% 1/4W	
R233	1-249-437-11	CARBON 47K 5% 1/4W	
R234	1-249-421-11	CARBON 2.2K 5% 1/4W	
R235	1-249-417-11	CARBON 1K 5% 1/4W	
R236	1-249-421-11	CARBON 2.2K 5% 1/4W	
R237	1-249-433-11	CARBON 22K 5% 1/4W	
R238	1-249-417-11	CARBON 1K 5% 1/4W	
R239	1-247-887-00	CARBON 220K 5% 1/4W	
R241	1-249-435-11	CARBON 33K 5% 1/4W	
R242	1-249-441-11	CARBON 100K 5% 1/4W	
R261	1-249-441-11	CARBON 100K 5% 1/4W	
R262	1-247-868-11	CARBON 36K 5% 1/4W	

Ref. No.	Part No.	Description			Remark
R266	1-247-807-31	CARBON	100	5%	1/4W
R271	1-247-852-11	CARBON	7.5K	5%	1/4W
R272	1-247-852-11	CARBON	7.5K	5%	1/4W
R273	1-249-434-11	CARBON	27K	5%	1/4W
R274	1-249-434-11	CARBON	27K	5%	1/4W
R275	1-249-419-11	CARBON	1.5K	5%	1/4W
R276	1-249-419-11	CARBON	1.5K	5%	1/4W
R277	1-249-441-11	CARBON	100K	5%	1/4W
R501	1-215-452-00	METAL	20K	1%	1/4W
R502	1-215-455-00	METAL	27K	1%	1/4W
R506	1-249-429-11	CARBON	10K	5%	1/4W
R507	1-249-435-11	CARBON	33K	5%	1/4W
R508	1-249-435-11	CARBON	33K	5%	1/4W
R509	1-249-435-11	CARBON	33K	5%	1/4W
R510	1-249-433-11	CARBON	22K	5%	1/4W
R511	1-249-413-11	CARBON	470	5%	1/4W
R512	1-249-429-11	CARBON	10K	5%	1/4W
R513	1-247-883-00	CARBON	150K	5%	1/4W
R514	1-249-427-11	CARBON	6.8K	5%	1/4W
R515	1-247-843-11	CARBON	3.3K	5%	1/4W
R516	1-249-428-11	CARBON	8.2K	5%	1/4W
R517	1-249-441-11	CARBON	100K	5%	1/4W
R518	1-249-429-11	CARBON	10K	5%	1/4W
R519	1-249-417-11	CARBON	1K	5%	1/4W
R520	1-249-432-11	CARBON	18K	5%	1/4W
R521	1-249-436-11	CARBON	39K	5%	1/4W
R522	1-249-441-11	CARBON	100K	5%	1/4W
R524	1-249-428-11	CARBON	8.2K	5%	1/4W
R525	1-249-421-11	CARBON	2.2K	5%	1/4W
R527	1-249-435-11	CARBON	33K	5%	1/4W
R528	1-247-807-31	CARBON	100	5%	1/4W
R529	1-247-862-11	CARBON	20K	5%	1/4W
R530	1-247-862-11	CARBON	20K	5%	1/4W
R531	1-249-437-11	CARBON	47K	5%	1/4W
R532	1-249-437-11	CARBON	47K	5%	1/4W
R533	1-249-429-11	CARBON	10K	5%	1/4W
R534	1-247-866-11	CARBON	30K	5%	1/4W
R535	1-247-858-11	CARBON	13K	5%	1/4W
R536	1-249-433-11	CARBON	22K	5%	1/4W
R537	1-249-437-11	CARBON	47K	5%	1/4W
R538	1-247-856-00	CARBON	11K	5%	1/4W
R539	1-247-856-00	CARBON	11K	5%	1/4W
R540	1-249-433-11	CARBON	22K	5%	1/4W
R541	1-249-432-11	CARBON	18K	5%	1/4W
R542	1-249-437-11	CARBON	47K	5%	1/4W
R543	1-249-437-11	CARBON	47K	5%	1/4W
R544	1-247-874-11	CARBON	62K	5%	1/4W
R545	1-249-410-11	CARBON	270	5%	1/4W
R546	1-249-421-11	CARBON	2.2K	5%	1/4W
R547	1-249-437-11	CARBON	47K	5%	1/4W
R701	1-249-421-11	CARBON	2.2K	5%	1/4W
R702	1-249-425-11	CARBON	4.7K	5%	1/4W
R703	1-249-425-11	CARBON	4.7K	5%	1/4W
R704	1-249-419-11	CARBON	1.5K	5%	1/4W
R705	1-249-418-11	CARBON	1.2K	5%	1/4W
R706	1-249-427-11	CARBON	6.8K	5%	1/4W
R707	1-249-419-11	CARBON	1.5K	5%	1/4W
R708	1-249-429-11	CARBON	10K	5%	1/4W
R709	1-249-419-11	CARBON	1.5K	5%	1/4W
R710	1-249-427-11	CARBON	6.8K	5%	1/4W
R711	1-249-427-11	CARBON	6.8K	5%	1/4W
R712	1-249-417-11	CARBON	1K	5%	1/4W
R713	1-249-409-11	CARBON	220	5%	1/4W
R714	1-249-425-11	CARBON	4.7K	5%	1/4W
R715	1-249-427-11	CARBON	6.8K	5%	1/4W
R716	1-247-866-11	CARBON	30K	5%	1/4W
R717	1-249-429-11	CARBON	10K	5%	1/4W
R718	1-249-437-11	CARBON	47K	5%	1/4W
R719	1-249-429-11	CARBON	10K	5%	1/4W
R720	1-249-417-11	CARBON	1K	5%	1/4W
R721	1-249-414-11	CARBON	560	5%	1/4W
⚠R722	1-219-137-11	FUSIBLE	0.33	10%	1/4W F
⚠R723	1-219-138-91	FUSIBLE	0.47	10%	1/4W F
R725	1-249-434-11	CARBON	27K	5%	1/4W
R801	1-249-441-11	CARBON	100K	5%	1/4W
R802	1-249-417-11	CARBON	1K	5%	1/4W
R803	1-247-807-31	CARBON	100	5%	1/4W
R804	1-247-807-31	CARBON	100	5%	1/4W
R805	1-247-807-31	CARBON	100	5%	1/4W
R806	1-247-807-31	CARBON	100	5%	1/4W
R807	1-249-422-11	CARBON	2.7K	5%	1/4W
R808	1-249-437-11	CARBON	47K	5%	1/4W
R810	1-249-429-11	CARBON	10K	5%	1/4W
R811	1-247-862-11	CARBON	20K	5%	1/4W
R812	1-249-430-11	CARBON	12K	5%	1/4W
R813	1-249-433-11	CARBON	22K	5%	1/4W
R814	1-249-433-11	CARBON	22K	5%	1/4W
R815	1-249-433-11	CARBON	22K	5%	1/4W
R816	1-247-807-31	CARBON	100	5%	1/4W
R817	1-249-419-11	CARBON	1.5K	5%	1/4W
R818	1-249-429-11	CARBON	10K	5%	1/4W
R819	1-249-434-11	CARBON	27K	5%	1/4W
R820	1-249-421-11	CARBON	2.2K	5%	1/4W
R821	1-249-421-11	CARBON	2.2K	5%	1/4W
R822	1-249-421-11	CARBON	2.2K	5%	1/4W
R823	1-249-428-11	CARBON	8.2K	5%	1/4W
R824	1-249-418-11	CARBON	1.2K	5%	1/4W
R825	1-249-417-11	CARBON	1K	5%	1/4W
R826	1-249-417-11	CARBON	1K	5%	1/4W
R827	1-249-417-11	CARBON	1K	5%	1/4W
R828	1-249-417-11	CARBON	1K	5%	1/4W
R829	1-249-417-11	CARBON	1K	5%	1/4W
R830	1-249-417-11	CARBON	1K	5%	1/4W
R831	1-249-417-11	CARBON	1K	5%	1/4W
R833	1-249-418-11	CARBON	1.2K	5%	1/4W
R834	1-249-428-11	CARBON	8.2K	5%	1/4W
R835	1-249-441-11	CARBON	100K	5%	1/4W
R836	1-249-417-11	CARBON	1K	5%	1/4W
R837	1-249-429-11	CARBON	10K	5%	1/4W

< VARIABLE RESISTOR >

RV111	1-241-630-11	RES, ADJ, CARBON 10K (RECORD, LEVEL L)
RV211	1-241-630-11	RES, ADJ, CARBON 10K (RECORD, LEVEL R)

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

MAIN **TRANSFORMER** **PANEL** **HP** **POWER SW** **VOL**

Ref. No.	Part No.	Description			Remark
		< VIBRATOR >			
X801	1-577-358-21	VIBRATOR, CERAMIC (4MHz)			
**********					
*	A-2007-705-A	PANEL BOARD, COMPLETE			
		**********			
		HP BOARD			
		*********			
		POWER SW BOARD			
		**********			
		VOL BOARD			
		**********			
*	3-923-303-01	HOLDER (FL TUBE)			
		< CAPACITOR >			
C161	1-162-305-11	CERAMIC	0.0068uF	30%	16V
C261	1-162-305-11	CERAMIC	0.0068uF	30%	16V
C561	1-126-964-11	ELECT	10uF	20%	50V
C562	1-126-964-11	ELECT	10uF	20%	50V
C722	1-113-925-11	CERAMIC	0.01uF	20%	250V
C901	1-161-494-00	CERAMIC	0.022uF		25V
C902	1-161-494-00	CERAMIC	0.022uF		25V
C903	1-161-494-00	CERAMIC	0.022uF		25V
C904	1-161-494-00	CERAMIC	0.022uF		25V
C905	1-126-933-11	ELECT	100uF	20%	10V
		< CONNECTOR >			
* CN901	1-568-839-11	SOCKET, CONNECTOR 23P			
* CN902	1-568-828-11	SOCKET, CONNECTOR 9P			
* CN903	1-568-826-11	SOCKET, CONNECTOR 7P			
CNP704	1-568-226-11	PIN, CONNECTOR 2P			
		< DIODE >			
D901	8-719-313-48	LED SEL6210S-TH12 (AUTO)			
		< FLUORESCENT INDICATOR TUBE >			
FL901	1-517-421-11	INDICATOR TUBE, FLUORESCENT			
		< IC >			
IC511	8-759-505-55	IC NJM4558L			
IC901	8-759-459-84	IC NJL56H400			
		< JACK >			
J502	1-568-519-41	JACK, LARGE TYPE (PHONES)			
		< RESISTOR >			
R163	1-249-421-11	CARBON	2.2K	5%	1/4W
R164	1-247-854-11	CARBON	9.1K	5%	1/4W
R165	1-249-409-11	CARBON	220	5%	1/4W
R263	1-249-421-11	CARBON	2.2K	5%	1/4W
R264	1-247-854-11	CARBON	9.1K	5%	1/4W
R265	1-249-409-11	CARBON	220	5%	1/4W
R901	1-249-429-11	CARBON	10K	5%	1/4W
R902	1-249-429-11	CARBON	10K	5%	1/4W
R903	1-249-429-11	CARBON	10K	5%	1/4W
R904	1-249-429-11	CARBON	10K	5%	1/4W
R905	1-249-418-11	CARBON	1.2K	5%	1/4W
R906	1-249-420-11	CARBON	1.8K	5%	1/4W

Ref. No.	Part No.	Description			Remark
R907	1-249-422-11	CARBON	2.7K	5%	1/4W
R908	1-249-424-11	CARBON	3.9K	5%	1/4W
R909	1-249-427-11	CARBON	6.8K	5%	1/4W
R910	1-249-431-11	CARBON	15K	5%	1/4W
R911	1-249-437-11	CARBON	47K	5%	1/4W
R912	1-249-418-11	CARBON	1.2K	5%	1/4W
R913	1-249-420-11	CARBON	1.8K	5%	1/4W
R914	1-249-422-11	CARBON	2.7K	5%	1/4W
R915	1-249-424-11	CARBON	3.9K	5%	1/4W
R916	1-249-427-11	CARBON	6.8K	5%	1/4W
R917	1-249-431-11	CARBON	15K	5%	1/4W
R918	1-249-437-11	CARBON	47K	5%	1/4W
R919	1-249-418-11	CARBON	1.2K	5%	1/4W
R920	1-249-420-11	CARBON	1.8K	5%	1/4W
R921	1-249-422-11	CARBON	2.7K	5%	1/4W
R922	1-249-424-11	CARBON	3.9K	5%	1/4W
R923	1-249-427-11	CARBON	6.8K	5%	1/4W
R924	1-249-431-11	CARBON	15K	5%	1/4W
R926	1-249-418-11	CARBON	1.2K	5%	1/4W
R927	1-249-420-11	CARBON	1.8K	5%	1/4W
R928	1-249-422-11	CARBON	2.7K	5%	1/4W
R929	1-249-424-11	CARBON	3.9K	5%	1/4W
R930	1-249-427-11	CARBON	6.8K	5%	1/4W
R933	1-249-413-11	CARBON	470	5%	1/4W
R934	1-249-417-11	CARBON	1K	5%	1/4W
R935	1-247-807-31	CARBON	100	5%	1/4W
R936	1-247-807-31	CARBON	100	5%	1/4W
		< VARIABLE RESISTOR >			
RV501	1-225-379-11	RES, VAR, CARBON 1K/1K (PHONE LEVEL)			
RV901	1-241-797-11	RES, VAR, CARBON 20K (REC LEVEL)			
		< SWITCH >			
S702	1-762-581-11	SWITCH, AC POWER PUSH (1 KEY) (POWER)			
S901	1-572-184-11	SWITCH, KEYBOARD (■)			
S902	1-572-184-11	SWITCH, KEYBOARD (◀◀)			
S903	1-572-184-11	SWITCH, KEYBOARD (▶▶)			
S904	1-572-184-11	SWITCH, KEYBOARD (●REC)			
S905	1-572-184-11	SWITCH, KEYBOARD (ARL)			
S906	1-572-184-11	SWITCH, KEYBOARD (FADER)			
S907	1-572-184-11	SWITCH, KEYBOARD (▷)			
S908	1-572-184-11	SWITCH, KEYBOARD (◁)			
S909	1-572-184-11	SWITCH, KEYBOARD (❚❚)			
S910	1-572-184-11	SWITCH, KEYBOARD (○REC MUTE)			
S911	1-572-184-11	SWITCH, KEYBOARD (RESET)			
S912	1-572-184-11	SWITCH, KEYBOARD (DISPLAY)			
S913	1-572-184-11	SWITCH, KEYBOARD (OPEN/CLOSE)			
S914	1-572-184-11	SWITCH, KEYBOARD (CD SYNCHRO)			
S915	1-572-184-11	SWITCH, KEYBOARD (▶▶▷▷❙)			
S916	1-572-184-11	SWITCH, KEYBOARD (❙◁◁◀◀)			
S917	1-572-184-11	SWITCH, KEYBOARD (❚❚)			
S918	1-572-184-11	SWITCH, KEYBOARD (▷)			
S919	1-572-184-11	SWITCH, KEYBOARD (■)			
S921	1-572-184-11	SWITCH, KEYBOARD (REPEAT)			
S922	1-572-184-11	SWITCH, KEYBOARD (PLAY MODE)			
S923	1-572-184-11	SWITCH, KEYBOARD (TIME)			
S924	1-572-184-11	SWITCH, KEYBOARD (EDIT/TIME FADE)			
S925	1-572-184-11	SWITCH, KEYBOARD (CLEAR)			
S926	1-572-184-11	SWITCH, KEYBOARD (CHECK)			

Ref. No.	Part No.	Description	Remark
S927	1-762-567-11	SWITCH, SLIDE (DOLBY NR)	
S928	1-762-609-11	SWITCH, SLIDE (DIR MODE)	
**********			
		MISCELLANEOUS	
		**********	
4	1-782-313-11	WIRE (FLAT TYPE) (26 CORE)	
⚠10	1-575-651-21	CORD, POWER	
63	1-769-917-11	WIRE (FLAT TYPE) (9 CORE)	
65	1-773-182-11	WIRE (FLAT TYPE) (23 CORE)	
66	1-775-370-11	WIRE (FLAT TYPE) (7 CORE)	
75	1-765-319-11	WIRE (FLAT TYPE) (7 CORE)	
121	1-638-983-11	PC BOARD, MOTOR FLEXIBLE	
203	1-452-719-11	MAGNET ASSY	
214	1-751-806-11	WIRE (FLAT TYPE) (5 CORE)	
⚠255	8-848-379-31	OPTICAL PICK-UP KSS-213B/S-N	
256	1-769-069-11	WIRE (FLAT TYPE) (16 CORE)	
HRPE101	A-2004-527-A	DECK ASSY, HEAD (PLAYBACK/RECORD/ERASE)	
M1	X-3365-377-2	MOTOR ASSY (CAPSTAN)	
M2	X-3363-501-2	MOTOR ASSY (REEL)	
M101	X-4917-523-4	MOTOR ASSY (SPINDLE)	
M102	X-4917-504-1	MOTOR ASSY (SLED)	
M903	A-4604-363-A	MOTOR (L) ASSY (LOADING)	
⚠T501	1-427-910-11	TRANSFORMER, POWER	
**********			
		ACCESSORIES & PACKING MATERIALS	
		**********	
	1-776-263-11	CORD, CONNECTION (AUDIO 100cm)	
	3-859-137-11	MANUAL, INSTRUCTION (ENGLISH,FRENCH,SPANISH,PORTUGUESE)	
	3-859-137-21	MANUAL, INSTRUCTION (GERMAM,DUTCH,SWEDISH,ITALIAN)	
**********			
		**********	
		HARDWARE LIST	
		**********	
#1	7-685-871-01	SCREW +BVTT 3X6 (S)	
#2	7-685-862-09	SCREW +BVTT 2.6X6 (S)	
#3	7-621-775-00	SCREW +B 2.6X3	
#4	7-627-556-08	SCREW +P 2.6X2.8	
#5	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
#6	7-621-255-15	SCREW +P 2X3	
#7	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

9-960-937-11

Sony Corporation
Home A&V Products Company

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